Massachusetts Maternal, Infant, and Early Childhood Home Visiting Program
FY14 Competitive Grant Final Report- D89

1. EXECUTIVE SUMMARY

The Massachusetts Department of Public Health (MDPH) is pleased to submit the FY2014 Competitive Grant Final Report for Grant D89, the Maternal, Infant and Early Childhood Home Visiting Program (MIECHV).

1A. Program Summary

The purpose of the Massachusetts MIECHV Competitive Grant application was to augment the FY12 Formula Grant by expanding evidence-based home visiting (EBHV) services and enhancing the early childhood system of care (SOC). Program goals were to: 1) strengthen activities aligned with State Title V; 2) provide comprehensive EBHV services to improve outcomes for pregnant and parenting families; and 3) strengthen a statewide SOC for families and children.

Competitive Grant funds allowed expansion of EBHV programs to 12 additional communities, bringing the total communities served to 17. MA MIECHV supported the Early Head Start (EHS), Healthy Families America (HFA) including Healthy Families Massachusetts (HFM), Healthy Steps, and Parents as Teachers (PAT) models in Boston, Chelsea, Brockton, Everett, Fall River, Fitchburg, Holyoke, Lawrence, Lowell, Lynn, New Bedford, North Adams, Pittsfield, Revere, Southbridge, Springfield, and Worcester.

Further, MA MIECHV: 1) expanded core and advanced trainings for staff including issues addressed by the MA Title V priorities; 2) implemented MIECHV benchmark data collection, conducted data analysis for program improvement, and standardized screening across the local implementing agencies (LIAs), 3) developed strategies to recruit, enroll and retain families; 4) supported families experiencing social isolation and mental health stressors with three program enhancements: Parents Together, Parent Cafes, and Moving Beyond Depression; 5) provided professional development to home visitors and the early childhood workforce; 6) strengthened father involvement; 7) implemented continuous quality improvement; 8) collaborated with state and community initiatives to strengthen family support services and early childhood SOCs; 9) implemented Welcome Family in four pilot communities to serve as an entry point into the SOC; and10) worked on fiscal sustainability strategies.

The rationale for both expanding services and enhancing the SOC through MA MIECHV funding was based on growing economic and health disparities, economic impacts of the recession, and emerging unmet social and health issues among vulnerable families within MA MIECHV communities. To address service gaps and improve maternal and early childhood health and development, services were focused within high-need populations including immigrants, homeless and impoverished families, teens, and families affected by substance use, mental health issues, and domestic violence.

1B. Summary of Home Visiting Services Provided

MA MIECHV supported 21 LIAs to deliver EBHV services. Table 1 provides an overview of EBHV services in each community. Cost per family was calculated by dividing total program costs by the number of participants who received at least one home visit during the project period. LIAs implementing the HFM model receive additional state funding through Children's Trust representing the state Maintenance of Effort (MOE). Implementation costs reflect both funding streams.

MA MIECHV developed and implemented three program enhancements: Parent Cafes, Parents Together support groups, and Moving Beyond Depression (MBD). The enhancements aimed to reduce social isolation, create access to depression treatment, and link families with services to foster healthy attachment, development, and family well-being. Parent Cafes enable parents to connect with other parents to foster family resilience and parent leadership. Parents Together is a six-week evidence-based support group that builds mothers' social networks and connections through group-based services. Finally, MBD provides In-Home Cognitive Behavioral Therapy™ (IH-CBT) to clinically depressed pregnant and parenting women.

Table 1. Home Visiting Services by Community (September 30, 2011-September 30, 2016)

At-risk community	MA MIECHV Site	Models and Number of Families Served between 9/30/11-9/30/16													
		# new and continuing families served by EHS			# new and continuing families served by HFA			# new and continuing families served by HS			# new and continuing families served by PAT			Total # Families	Total # slots available
		New	Cont.	Max CL	New	Cont.	Max CL	New	Cont.	Max CL	New	Cont.	Max CL		
Boston	Catholic Charities				252	0	489							252	489
	Crittenton Women's Union				161	0	237							161	237
Brockton	Health Imperatives				249	0	365							249	365
Chelsea	MGH Health Center				130	25	112	394	0	405				549	517
Everett	Hallmark Health				153	59	265							212	265
Fall River	People, Inc.				312	73	426							385	426
Fitchburg	Gardner VNA				301	99	452							400	452
Holyoke	MSPCC Holyoke				161	40	361							201	361
	HCS Head Start, Inc.	49	0	53										49	53
Lawrence	MSPCC Lawrence				314	79	491							393	491
Lowell	MSPCC Lowell				243	75	449							318	449
Lynn	Catholic Charities				274	96	534							370	534
New Bedford	Kennedy Donovan Center				227	70	362							297	362
	PACE, Inc.										64	0	92	64	92
N. Adams/ Pittsfield	Childcare of the Berkshires				143	27	243							170	243
	Berkshires Children and Families										116	27	118	143	118
Revere	MGH Health Center							106	0	166	31	17	68	154	234
Southbridge	WCAC				213	50	375							263	375
Springfield	Square One				436	107	748							543	748
	HCS Head Start, Inc.	47	0	49										47	49
	YWCA										58	0	59	58	59
Worcester	MSPCC Worcester				284	61	582							345	582
TOTAL		**96**	**0**	**102**	**3853**	**861**	**6491**	**500**	**0**	**571**	**269**	**44**	**337**	**5623**	**7501**
COST PER FAMILY		**$ 5,925.30**			**$4,591.73**			**$4,356.70**			**$ 5,257.65**				

Key: EHS=Early Head Start-Home Based, HFA=Healthy Families America, HS=Healthy Steps, PAT=Parents as Teachers, Max CL=Maximum Caseload

1C. Evaluation Summary

The MA MIECHV evaluation focused on three levels of inquiry: 1) state, reviewing the organization and behaviors of relevant state systems and how these support sustainability; 2) community, understanding the capacity of communities in which services are provided; and 3) program/individual/family, examining implementation, utilization, and outcomes of home visiting services. There are evaluation questions at each level (state level questions [SLQ], community level questions [CLQ], program/family/individual level questions [ILQ]), addressed via multiple research designs (Table 2).

Table 2. Evaluation Questions and Study Design

Evaluation Question	Study Design
SLQ1. How well have state agencies coordinated to support developing a statewide SOC for families?	Qualitative
SLQ2.To what extent has MA MIECHV successfully implemented a universal one-time home visit that connects families to formal and informal community resources?	Mixed methods
SLQ3. To what extent have state agencies identified and implemented a fiscal plan to sustain the services and systems provided by MA MIECHV?	Qualitative
SLQ4. To what extent and in what ways have the changes at the state system level impacted community capacity to support child development?	Qualitative, social network analysis (SNA)
CLQ1. What are the characteristic components of communities that maximize capacity to support family health and development?	Qualitative
CLQ2. What is the capacity of communities to be responsive to the specific needs of families?	Qualitative
CLQ3. To what extent have communities been able to develop a coordinated and responsive SOC in the context of MA MIECHV?	Qualitative, SNA
CLQ4. To what extent have community-level needs, initiatives and/or strategies informed the development of a statewide SOC?	Qualitative
CLQ5. To what extent does MA MIECHV facilitate family engagement within early childhood SOC, and to what extent do systems of care respond to family needs?	Mixed methods
CLQ6. For families participating in one of the EBHV models being implemented by MA MIECHV, what is the longer term impact of the program on family engagement within early childhood SOCs?	Randomized, controlled trial (RCT)
CLQ7.What is the context in which MA MIECHV operates at the community level (e.g., adequacy/ availability of resources to meet family need)?	Qualitative, SNA
ILQ1.To what extent are the MA MIECHV home visiting programs being implemented with fidelity to program standards at MA MIECHV, national model, and enhancement specific levels?	Quantitative
ILQ2. To what extent have the health, development, and education outcomes of MA MIECHV participants improved over the course of the initiative?	Quantitative
ILQ3. To what extent have MA MIECHV enhancements improved program capacity to strengthen family engagement in services and effectively respond to families' needs?	Quantitative, Qualitative
ILQ4. For families participating in one EBHV model being implemented by MA MIECHV (HFM), what are longer term impacts of the program on health, development and education?	RCT

Population Assessed

Populations targeted by the evaluations included state agency leaders, MA MIECHV administrators and program staff, community agency leaders and family service providers, and program participants.

Major Findings

System-building efforts yielded mixed results at the state and community levels. Despite the fact that there is broad agreement about what an early childhood SOC should look like, changes in leadership and lack of political will appeared to have impeded substantive systems-building at the state level. Still, there has been discernible progress in many areas, including the successful piloting and expansion of a universal one-time nurse home visiting program in several communities. Generally, communities were characterized by dense service networks and mini-systems of care rather than the coherent, efficient and integrated systems envisioned at the state level. And finally, the MA MIECHV initiative was successful in considerably expanding and enhancing home visiting services statewide. Findings from the randomized controlled trail (RCT) revealed that HFM, one of the MA MIECHV EBHV models, had significant, sustained positive impacts in a number of areas.

Limitations

Study limitations included the following: 1) for every EBHV model except HFM, the management information system used was brand new to them; the data quality was not even across models as a result; 2) SNA were based on data from 54% of surveyed programs; while this response rate is comparatively high, it still created methodological challenges; 3) The RCT used an intention to treat design, and program effects include all mothers assigned to receive home visiting services, 14% of whom did not take-up the program. Although this represents a conservative analytic approach, results may not fully reflect program benefits for those who actually used it; 4) although the MHFE-2EC sample is relatively representative of the original MHFE-2 sample, 30% of the original sample did not participate at in the follow-up study.

State-level Implications

While key characteristics required for systems development, including coalition building and centralizing community level resources, coordination of state level policies and programs, sustainable funding, and integrated data systems remain challenges in Massachusetts, there has been discernible progress in many areas. MDPH was able to establish Welcome Family in four MA MIECHV communities. Over the grant period, Welcome Family experienced an increase in the proportion of eligible births accepting a referral, thus improving efforts to identify family needs and make appropriate connections to formal and informal community resources. MDPH also has made progress in cross-agency initiatives to support early childhood health and development, including successfully applying for and implementing the Essentials for Childhood project and the Early Childhood Comprehensive Services Project.

Community-level Implications

MA MIECHV programs are embedded in dense networks of social services, related to one another by varying degrees of awareness, coordination, cooperation, and collaboration. It is difficult to reconcile the state vision for a comprehensive early childhood SOC with the multi-faceted, volatile mini-SOCs that exist on the ground, often formed through grants or initiatives that are time-limited, and informal connections based on personal relationships among providers. Communities varied in terms of their capacity to support family health and development (e.g., availability of concrete resources, articulated goals and priorities, social infrastructure facilitating collaboration, and monitoring and accountability mechanisms). Communities with a strong backbone organization responsible for guiding the early childhood agenda appeared to be more successful at supporting an early childhood SOC infrastructure than those with no such main entity.

Individual-level Implications

Process and outcome analyses of home visiting and enhancement services suggest that MA MIECHV was successful in expanding the state home visiting system. Several thousand families were served and screened, and rates of participation were on a par with other home visiting programs across the nation. Outcome analyses from the MBD non-experimental study were promising, with striking reductions in depression, parenting stress, and low social support in mothers who completed the program. Findings from the RCT suggest that HFM was able to affect a number of positive outcomes in participants, including reduced depression, homelessness, and substance use, and results from pathway analyses demonstrate that early program impacts effect change in related domains at later time points, suggesting that the positive impacts of home visiting extends well beyond the time of program engagement. Findings across studies indicate that communities are woefully ill-equipped to meet families' basic needs, particularly housing concerns. That programs were able to be as effective as they were within these challenging contexts confirms the importance of the role home visiting plays in early childhood SOCs.

Lessons Learned

- System-building needs to be deliberate, targeted, incentivized, and both vertically and horizontally aligned at the state and local levels. To avoid duplication and competition among programs, state agency leaders should examine the systems and mini-systems that already exist at the community level, and build on what is there.
- Services and collaborative structures that are driven by community-level needs and desires rather than short-term funding availability and grant requirements will likely be more effective. Communities with some kind of backbone organization—an entity dedicated to facilitating collaboration, driving the SOC agenda, and supporting the work of local community providers—are more likely to demonstrate strong early childhood SOCs. These structures should be driven by local interests and supported at the state levels.
- Findings from the RCT demonstrated high levels of vulnerability in the HFM target population. While main effects findings were promising, moderation analyses suggested there are subpopulations with which home visitors are less effective. Home visiting programs may want to invest in some concentrated training opportunities in these intervention techniques for interested staff as part of a career ladder/professional development track. For families needing services beyond the capabilities of home visitors, specialized programs like MBD, designed to work in collaboration with home visiting programs, can fill a serious gap in services. In the absence of federal funding, program administrators should continue to think about creative ways to support MBD, as well as similar complementary initiatives, moving forward.
- Home visiting programs play a critical role in connecting families to services, but the demands of service coordination can also place an undue burden on program staff. Adding a service coordination component, perhaps in the form of a dedicated staff member, may help home visiting programs to respond to new or changing policies, shifting eligibility rules, and limited public resources without further taxing their home visitors.

2. INTRODUCTION & BACKGROUND

The Massachusetts Department of Public Health (MDPH), the state lead for the Massachusetts Maternal, Infant, and Early Childhood Home Visiting Program (MA MIECHV), received D89 Competitive Grant funds for the September 30, 2011 – September 30, 2016 project period. The application built on the MA MIECHV Formula Grant application, with

goals of expanding evidence-based home visiting (EBHV) services and supports and enhancing efforts to build a comprehensive statewide early childhood SOC.

2A. Overview of Goals and Objectives

The MA MIECHV goals and objectives are as follows:

Goal 1: Strengthen and improve the programs and activities carried out under State Title V Agency

Objective 1.1**:** Align MA MIECHV Initiative with State Title V priorities
Objective 1.2**:** Promote medical/dental home by linking families to comprehensive health care system
Objective 1.3**:** Integrate training and strengthen capacity to screen and refer for child development, mental health, substance use, and domestic violence
Objective 1.4**:** Integrate education and support on reproductive life planning, breastfeeding, nurturing care giving, and home safety
Objective 1.5**:** Coordinate with the MDPH Bureau of Substance Abuse Services (BSAS) to link MA MIECHV participants with BSAS services as needed

Goal 2: Identify and provide comprehensive EBHV and home-based services to improve outcomes for pregnant and parenting families in high need communities

Objective 2.1**:** Support and expand EBHV programs in 12 additional high need communities
Objective 2.2**:** Develop and implement parent support groups to reduce depression, social isolation, and child maltreatment
Objective 2.3**:** Provide specialized training and supervisor supports to MIECHV home visitors and agencies in all of the identified high need communities to improve skills, build infrastructure, and enhance collaboration
Objective 2.4**:** Support program strategies to outreach, enroll, and retain vulnerable families, including first time parents, recent immigrants, underserved populations, and low income families
Objective 2.5**:** Provide home-based interventions to improve family health, social-emotional development
Objective 2.6**:** Ground home-based interventions in the Strengthening Families framework highlighting the Five Protective Factors
Objective 2.7: Promote inclusion of fathers among program participants
Objective 2.8**:** Enhance capacity to collect, analyze and report on MA MIECHV program data
  Objective 2.8.A**:** Conduct an implementation study of MA MIECHV
  Objective 2.8.B**:** Conduct longitudinal study to inform and improve program practices at agency and system-wide levels

Goal 3: Improve coordination of services for families by building and enhancing a statewide SOC for families and young children

Objective 3.1**:** Enhance collaboration among state and local community providers to ensure a seamless system of identification, referrals, and management. Also, support communities in developing informal and formal linkages across agencies to avoid duplication and enhance coordination of care and access to services
Objective 3.2**:** Support continued collaboration with key organizations, civic partners, and community stakeholders to affect policies and systems across the Commonwealth
Objective 3.3**:** Integrate MA MIECHV into other state maternal, infant, and early childhood programs and systems
Objective 3.4: Develop Welcome Family within MA MIECHV communities
Objective 3.5**:** Use cross-system data and community service context analyses to build and evaluate MA MIECHV's impact on enhancing statewide systems of care

2B. Purpose and Rationale for the Grant

The purpose of the MA MIECHV Competitive Grant application was to expand the FY12 Formula Grant application by supporting EBHV services in additional high need communities and enhancing the statewide early childhood SOC. Competitive Grant funds supported expansion of EBHV programs to12 additional communities as well as additional funds for the five Formula Grant communities. With Competitive Funding MA MIECHV was able to serve the 17 highest need communities identified in the 2010 statewide Needs Assessment.

Competitive funds also supported the following: 1) training curriculum, 2) program enhancements including *Parent Cafes*, *Moving Beyond Depression*, and *Parents Together*, 3) forums and networking opportunities for workforce development, 4) the Welcome Family program, 5) strategies to effectively recruit, enroll and retain families; 6) on-going community collaborations through statewide forums and regional meetings, 7) benchmark data collection and analysis, 8) continuous quality improvement, and 9) an integrated evaluation of MA MIECHV.

Despite robust statewide family support services in MA, the 2010 and 2015 MA MIECHV Needs Assessments underscored persistent health and economic disparities within the state. Compared to state averages, within the 17 MA MIECHV communities there are significantly higher rates of premature birth, low birth weight, infant mortality, poverty

(below 100% FPL), substance use disorders, high school drop-outs, unemployment, and child maltreatment supporting the rationale for additional home visiting services.

2C. Populations Targeted by the Home Visiting Program

The MA MIECHV program targets services to the following high need populations:

- Low income families
- Immigrants
- Families affected by housing insecurity and/or homelessness
- Families affected by child abuse or neglect and/or have had interactions with Department of Children and Families (DCF)
- Families affected by substance use
- Families with users of tobacco products in the home
- Families affected by domestic violence
- Families affected by mental health issues
- Families affected by developmental or cognitive delays or disabilities
- Parents with low student achievement
- Parents under the age of 21

2D. Community Context

Home visiting has long been integral to a Massachusetts' comprehensive SOC for children and families. Prior to the promulgation of the federal MIECHV legislation, approximately 16 home visiting models operated in Massachusetts, including four EBHV models: 1) Early Head Start (EHS), 2) Healthy Families America (HFA), 3) Healthy Steps, and 4) Parents as Teachers (PAT). Since 2010, MA MIECHV has made a substantial contribution to growing, strengthening, and enhancing the statewide home visiting infrastructure.

The 2010 MA MIECHV Needs Assessment[i] identified 17 high need communities across MA including 15 urban and two rural communities. Forty percent of foreign-born families in the state live within these communities. Eight of the 15 communities have large non-Hispanic Black populations. All MA MIECHV communities have higher proportions of families living in poverty than the state average. Fifteen communities have unemployment rates higher than the state average, and in 11 communities at least half of all households are headed by a single-parent. The violent crime rate exceeds the statewide rate in 16 communities. Most of these communities also have poorer birth outcomes including preterm and low birthweight infants. Child maltreatment rates are also higher in most the MIECHV communities. All MA MIECHV communities exceed the statewide high school dropout rate and these communities are more likely to be impacted by the opioid crisis including higher rates of infants with neonatal abstinence syndrome (NAS).

2E. Models, Interventions, Adaptions, or Development Activities Associated with Grant Implementation

During the project period MA MIECHV supported the implementation and expansion of four EBHV models: EHS, HFA, Healthy Steps, and PAT. MA MIECHV also supported HFM, an HFA accredited program, serving young, first-time parents. With MIECHV funds, the EHS and Healthy Steps programs each provided services in two of the MA MIECHV communities; Springfield and Holyoke and Chelsea and Revere, respectively. PAT provided services in six communities (Holyoke, New Bedford, North Adams, Pittsfield, Revere, and Springfield), and the HFA model provided services in the community of Chelsea. HFM provided services in 15 communities: Boston, Brockton, Everett, Fall River, Fitchburg, Holyoke, Lawrence, Lowell, Lynn, New Bedford, North Adams, Pittsfield, Southbridge, Springfield, and Worcester.

The following section outlines the interventions, adaptations, and activities conducted by MA MIECHV from September 30, 2011 - September 30, 2016. These components are organized by the three MA MIECHV goals.

Goal 1: Strengthen Activities Carried Out under State Title V

- Support of Title V Priorities: Starting in 2012, MA MIECHV promoted the Title V priorities of social connectedness, medical home, maternal health and nutrition, injury prevention, and safe sleep. The program also supported increased screening and content expertise in maternal mental health, domestic violence, and substance use. MA MIECHV worked with partners at MDPH, other state agencies and content experts to develop pre-service lessons on Title V, medical home, and social connectedness, as well as trainings on maternal mental health, domestic violence, substance use, breastfeeding, Medicaid, injury prevention and safe sleep. MA MIECHV also worked with partners to develop screening tools for domestic violence and substance use. (See Section 2F for more details.)
- Culturally and Linguistically Appropriate Services (CLAS): All MDPH programs and vendors are required to abide by CLAS standards which offer a framework to address structural, clinical and organizational factors that contribute to health disparities. The standards are to 1) foster cultural competence, 2) build community partnerships, 3) collect and share diversity data, 4) support benchmark planning and evaluation, 5) reflect and respect diversity, and 6) ensure language access. MA MIECHV LIAs complete annual CLAS Agency Self-Assessments to identify areas of improvement.

Goal 2: Provide Comprehensive EBHV and Home-Based Services to Improve Outcomes for Families

- EBHV Services: Starting in 2012, MA MIECHV expanded EBHV services in 17 communities (Table 1).

- Updated State Needs Assessment: In 2015, MDPH updated at-risk indicators for the 17 communities to inform program implementation and expansion. Several population subgroups were selected for more in-depth investigation, including families who are: 1) foreign-born; 2) homeless; 3) affected by domestic violence, substance abuse, or mental health issues; 4) fathers; 5) families with active military members and veterans; and 6) families with incarcerated or formerly-incarcerated members. Public data were used to describe these populations; additional information was collected through key informant interviews and discussion groups.
- MA MIECHV Training Curriculum: In 2012, MA MIECHV implemented the Training Curriculum which consisted of two components: 1) required pre-service self-paced lessons and worksheets that covered the topics of: Title V, social connectedness, medical home, Strengthening Families, and enhancing statewide systems, and 2) required in-person trainings in the key core competency areas of: emotional wellness/mental health, substance use, domestic violence, motivational interviewing, developmental and social-emotional health, and injury prevention, including safe sleep.
- Advanced Trainings and Professional Development Opportunities for Home Visiting Staff: Starting in 2013, advanced trainings offered included: 1) Motivational Interviewing, 2) group facilitation, 3) healthy sexuality, 4) Cues, Holding, Eye contact, Empathy, Environment, Rhythmicity/Reciprocity, and Smiles (CHEEERS) parent-child relationship assessment, 5) trauma-informed practice, 6) advanced breastfeeding, and 7) substance-exposed newborns. The Nursing Child Assessment Satellite Training (NCAST) focused on teaching and feeding scales to support the parent-child relationship, was also offered. In partnership with Early Intervention, trainings were offered on the Newborn Behavioral Observations Training (NBO), a method to support families' positive interactions with their newborn, and the Center for Social Emotional Foundations for Early Learning (CSEFEL) pyramid model, a model for early childhood professionals to promote infant social-emotional health. Lastly, MA MIECHV partnered with the state office of Medicaid to provide training on Medicaid in Massachusetts.

  MA MIECHV and the Children's Trust provided Achieve OnDemand access and Facilitating Attuned Interactions (FAN) training in 2016. Achieve OnDemand is an online professional development resource developed by the Ounce of Prevention for home visitors and supervisors. FAN, developed by the Fussy Baby Network, is an approach to family engagement that helps professionals meet parents' urgent concerns, while also providing a structure to the visit.
- Networking Opportunities for Home Visiting Staff: MA MIECHV and the Children's Trust offered regional networking opportunities for home visiting staff twice per year across all EBHV models. The Home Visitor Network is a facilitated forum to network, share best practices, and discuss a selected topic. The Supervisor Network, held twice per year, promotes reflective supervision, collaboration and support, and ongoing quality improvement. The Father and Family Network, a networking and training group for professionals who work with fathers, meets six times per year.
- Forums and Conferences for Home Visiting Staff: In 2012, MA MIECHV held the *In the House: A Community Approach* Forum with the goals of 1) providing LIAs and their community partners a framework for understanding the value of advisory councils, 2) understanding the role of collaborative partnerships using place-based initiatives, and 3) providing strategies on how to engage partners in community-specific activities. From 2013-2016 MA MIECHV held annual full day Grantees Meetings that provided opportunities to network, celebrate accomplishments, hear state and federal updates, and have detailed discussions on topics of their choosing, such as client recruitment and retention and initiating difficult conversations. Finally, MA MIECHV has supported the Children's Trust's annual *A View from All Sides* Conference which provides home visitor workshops.
- Program Enhancements
  - *Parent Cafes:* In spring 2013, staff from five MA MIECHV LIAs were trained in the Parent Café model. Following the training the sites provided two series of MA MIECHV Parent Cafés; 265 parents participated.
  - *Parents Together:* In 2012, MA MIECHV worked with Dr. Neil Guterman to develop in-state capacity for Parents Together, a six-week evidence-based intervention that builds mothers' social connectedness through group-based services. By the end of the project period, all MA MIECHV LIAs had conducted at least one series, with many conducting two or more. In 2014, Tufts University MA MIECHV evaluated the efficacy of the Parents Together program. Please see the Evaluation section for more information.
  - *Moving Beyond Depression:* In 2012, MA MIECHV contracted with Dr. Robert Ammerman to implement Moving Beyond Depression (MBD). MBD provides 15 In-Home Cognitive Behavioral Therapy™ (IH-CBT) sessions with a licensed masters level clinician for clinically depressed pregnant and parenting women in home visiting services. In total, clinicians from four mental health agencies provided MBD to 22 home visiting programs. MA MIECHV also coordinated with other early childhood services including Early Intervention to provide MBD services to clients from these programs. The project ended when it was no longer possible to use MIECHV funds to support MBD. More information from the Tufts University evaluation of MBD is provided in the evaluation section. .
- Data and Benchmarks: MA MIECHV has aligned data collection tools and systems to uniformly collect MIECHV benchmark data. The MA MIECHV Data Team supports data collection and reporting through annual webinars, quarterly program-specific benchmark reports, and technical assistance (TA) calls to discuss quarterly reports and identify program strengths and areas for improvement. A Data Quality Work Group oversees data quality improvement. The Work Group ensures benchmark data are entered as required, connects benchmark data to program development

plans, provides TA to programs and works with database developers to modify management information systems (MIS) to facilitate accurate data entry.

In 2014 all home visitors and supervisors received tablets and secure wireless service. The tablets enabled home visitors to improve service delivery by accessing online resources during home visits and enabling participants to enter their own screens. The tablets also facilitate data entry into the MIS through a password-protected secure server.

- Continuous Quality Improvement (CQI): Developed in 2013 and updated in 2014, the MA MIECHV CQI Plan uses process and outcome data to improve program services and participant outcomes. The key elements of the CQI Plan include: 1) a formal CQI Team within the MA MIECHV management structure, 2) the requirement that LIAs complete two Plan, Do, Study, Act cycles per year, and 3) review of quarterly benchmarks reports. A CQI Training was held in September 2013 for all LIAs and MA MIECHV management. Since 2013, MA MIECHV has also disseminated an annual LIA survey to gather feedback on program improvement.
- Sub recipient Monitoring: A formal sub-recipient monitoring plan was developed and implemented in 2015. The plan includes annual site visits, fiscal check-ins with the MA MIECHV Fiscal Management and Budget team, and quarterly updates from evaluators.

Goal 3: Improve Coordination of Services by Enhancing a Statewide SOC

- Welcome Family: MA MIECHV worked closely with state agencies and community partners to implement and pilot Welcome Family, a universal one-time nurse home visiting program. The goal of Welcome Family is to provide support to postpartum families, promote optimal maternal and infant well-being, connect families to community resources, and provide an entry point into a SOC for families with newborns. All families giving birth in the pilot sites are eligible to receive one home visit by a public health nurse within eight weeks of delivery. The nurse provides a brief physical assessment of mother and baby, and screens for depression, unmet health needs, substance use, parental and infant nutrition, social isolation, domestic violence, and other needs. Welcome Family was piloted in four sites: Boston, Fall River, Lawrence, and Lowell. Since 2013, 3,349 families received a one-time Welcome Family visit. Please see the Evaluation Section for more details.

  The Welcome Family Advisory Committee was established in 2012 to advise all aspects of the program. Membership currently includes representation from the six sites, EEC, MA Society of Prevention of Cruelty to Children, Children's Trust, Medicaid, and clinicians.
- Collaborations to Strengthen Supports within the Early Childhood System: MA MIECHV has formed strategic partnerships with state agencies and statewide initiatives to promote family-centered frameworks, tools, and resources to create a common language of support. MDPH has collaborated with EEC and the Children's Trust on cross systems trainings and professional development opportunities. In October 2015, during Safe Sleep Awareness Month, MA MIECHV supported dissemination of the *Sleep Baby- Safe and Snug* board book to all birth hospitals and Welcome Family participants. A total of 6,730 books (in English and Spanish) were disseminated. Lastly, in May 2016, MA MIECHV collaborated with the MA Act Early campaign to disseminate 8,200 (English and Spanish) of the CDC's Learn the Signs-Act Early Campaign's booklet: *Milestone Moments- Learn the Signs. Act Early*.
- MA MIECHV Systems Team: The MA MIECHV System Team, developed in 2011, was charged with supporting collaborative efforts within the early childhood SOC and helping to support and enhance a continuum of services. In Spring 2013, the Systems Team compiled a survey for all MA MIECHV LIAs and Coordinated Family and Community Engagement (CFCE) programs. CFCE programs support families with children from birth through age eight years by providing family support programs and referrals to comprehensive services. The survey measured the level of collaboration between the two programs and collaboration with service providers in their communities. The majority of respondents indicated that they were interested in establishing community meetings to improve coordination. Subsequently, focus groups were held in three communities with Holyoke selected as a site where system innovations might be implemented.

  The Systems Team collaborated with selected LIAs in Holyoke to address family homelessness, a critical community issue they had identified. In Summer of 2014, Harvard Catalyst and the Systems Team convened a series of meetings with community leaders and key stakeholders including community agencies, housing authorities, and state legislators to identify the key causes and impact of homelessness. The group identified five focal areas: 1) hotel management, 2) food and transportation, 3) advocacy and legislation, 4) childcare, and 5) comprehensive service coordination for homeless families. Results were shared with the Massachusetts Department of Housing and Community Development (DHCD). This initiative highlighted the need for increased funding for intensive services and service coordination for homeless families and strategies for preventing homelessness.
- Newsletters and Social Media: The MIECHV Communications Director distributes monthly MA MIECHV Digests via email to nearly 500 professionals, educators, and providers. The Digest contains information on local trainings, learning opportunities, research, and information on maternal and child health. The Communications Director manages three MA Home Visiting social media platforms that share maternal and child health information daily. MA Home Visiting has 1,411 Twitter followers, 392 Facebook likes, and 473 Pinterest followers looking at its 45 Pinterest boards.

MA Home Visiting Pinterest has a robust collection of articles, videos and podcasts that home visitors can access as resources when working with families.

- Raising of America: Starting in 2014, MA MIECHV worked collectively with the Essentials for Childhood team (EfC), EEC, and other state agency partners to promote community screenings and discussions of the *Raising of America* documentary. The team also worked with academic partners to host a screening and discussion. These included Boston College, Tufts University, and Lesley University.

2F. Support and Collaboration with Key Stakeholders

The MA MIECHV Advisory Committee includes representatives from EEC, Head Start State Collaboration Office (HSSCO), DCF, Children's Trust, DHCD, MDPH's Bureau of Substance Abuse Services (BSAS) and Office of Adolescent Health, evaluators, model developers, Medicaid, content experts, and an LIA representative. The Advisory Committee provides ongoing guidance and ensures integration into other state family support initiatives. Members participate on MA MIECHV Implementation Teams. Other collaborative efforts include the following:

- Children's Trust: MA MIECHV partnered with the Children's Trust through an inter-departmental service agreement (ISA) to collaborate on developing, delivering, and coordinating the MA MIECHV Training Curriculum. As the in-state administrator for the HFM program, the Children's Trust supports the 15 participating HFM programs. The Children's Trust also manages the Participant Data System (PDS).
- EEC: MA MIECHV partnered with EEC through an ISA, to enhance the early childhood SOC. Training efforts include providing ASQ and ASQ:SE trainings to staff working at family homeless shelters and CFCE grantees, and Strengthening Families Framework training as part of the Race to the Top Early Learning Challenge Grant. The collaboration with EEC facilitated communication between CFCE grantees and MA MIECHV LIAs to build the continuum of care in MA MIECHV communities. Lastly, MA MIECHV MDPH staff participates on the HSSCO team, administered through EEC.
- BSAS: In 2012, MA MIECHV partnered with BSAS to implement a comprehensive substance use training and screening tool based on the Screening, Brief Intervention, and Referral to Treatment framework. The MA MIECHV substance use liaison provided LIAs with resources for families affected by substance use.
- MDPH Division of Violence & Injury Prevention (DVIP), Futures without Violence & Child Safety Network: In 2012, MA MIECHV partnered with DVIP & Child Safety Network to develop an injury prevention and safe sleep training for home visitors. MA MIECHV partnered with DVIP and Futures without Violence to develop domestic violence training and implement the Healthy Mom, Happy Babies screening across all LIAs.
- Early Intervention (EI)/IDEA Part C Program: MA MIECHV partnered with EI to offer the NBO and CSEFEL trainings (see Section 2E, Goal 2). MA MIECHV built a partnership between MBD and EI to promote cross program referrals and support comprehensive mental health services. Lastly, as of January 2016 most Welcome Family programs will be housed in EI agencies. This strategically aligns the work of MA MIECHV and Early Intervention and supports both child find activities and connections to the SOC
- Early Childhood Comprehensive Systems Grant (ECCS): In 2013, MA MIECHV partnered with ECCS to develop community-based strategies to mitigate toxic stress for young children in MA MIECHV communities.
- Model Developers: EBHV models are members of both the Advisory Committee and Models Implementation Team. MA MIECHV collaborated with model developers to host in-state training opportunities for PAT, and content trainings and other learning opportunities offered by the Children's Trust to other EBHV models. Additional collaboration included joint site visits with PAT and HFM administrators.
- Essentials for Childhood (EfC): MA MIECHV partnered with EfC to promote and screen Raising of America.

2G. Challenges and Resolution of Challenges

The following highlights key challenges faced by MA MIECHV and approaches used to resolve the issues.

Integrating Multiple Evidence-based Models into a Single System

All MA MIECHV models have distinct program goals, curricula, and fidelity requirements. To uniformly collect information needed for benchmark reporting and integrate all models into a statewide program, MA MIECHV 1) involved all models on the MA MIECHV Advisory Committee; 2) created a Models Implementation Team, bringing together model representatives on a monthly basis to discuss program developments and ensure model fidelity; 3) developed the MA MIECHV Training Curriculum to create a common language and knowledge base for all model staff; 4) provided TA to the LIAs that chose to implement more than one EBHV model in their community to identify best practices for coordinating services; and 5) provided TA to all LIA's on quarterly benchmark reports and challenges with data collection.

Collaborating Across State Agencies and Maintaining an Effective Governance Structure

Collaborating across state agencies to implement MA MIECHV and maintaining a responsive and effective governance structure has been a challenge. MA MIECHV partnered with project consultant, The Ripples Group, in 2012 to reorganize

the governance structure to streamline decision-making and implementation processes. The reorganization identified five key participating bodies: 1) the Executive Committee, with representation from MDPH, EEC, and the Children's Trust, 2) the Advisory Committee, 3) the five Implementation Teams, 4) MDPH as the lead agency, and 5) the LIAs and EBHV models. The Ripples Group also developed a Key Decision Matrix that was reviewed, adjusted and approved periodically to clarify goals, roles and responsibilities for effective governance.

Encountering Unanticipated Programmatic Challenges in Developing and Scaling up Program Enhancements

While MA MIECHV has successfully implemented the majority of the supports and enhancements proposed in the original application, timelines were adjusted to extend planning for MBD and Welcome Family. As a result, MA MIECHV was not able to implement New Child Project or the nursing component described in the application.

Recruitment and Retention

Recruitment and retention of families was a challenge for HFM LIAs. MA MIECHV developed an action plan in collaboration with the Children's Trust to define service capacity, identify barriers to enrollment, and develop a plan for improving capacity. MA MIECHV also supported the Children's Trust's quality improvement strategies, provided quarterly enrollment reports to LIAs, held a session on family recruitment and retention at the MA MIECHV Grantees Meeting, and shared distribution lists to share information across LIAs. Finally, the Children's Trust has encouraged salary increases for home visiting staff to a floor of $15 per hour.

Federal Eligibility Adjustments: Healthy Steps and Moving Beyond Depression (MBD)

During the project period MA MIECHV received notice that Healthy Steps and MBD programs were no longer eligible for MIECHV funding. This was a significant challenge as MA MIECHV had worked to implement, scale up, and establish both programs. Additional challenges came with transitioning the 372 families served by Healthy Steps to other services. When the program closed, Chelsea and Revere expanded the HFA and PAT programs respectively to accommodate some Healthy Steps families. However, those programs did not have capacity to serve all families previously enrolled. Both LIAs developed transition plans, which included referring families to community resources and maintaining a social worker as a liaison between clinics and EBHV programs.

MDPH convened an interagency working group to support LIAs while MBD scaled down to identify community services for maternal depression. The working group: 1) provided three 3-day trainings on CBT for maternal depression to help the mental health agencies increase capacity to treat maternal depression; 2) assisted the mental health agencies in scaling down their programs; 3) developed sustainability recommendations and resources for mental health agencies to develop internal capacity to sustain practices in treating maternal depression; and 4) met with statewide stakeholders to share lessons learned and outcomes of MBD and the positive impact of CBT on maternal depression. All enrolled clients were able to continue MBD until the end of treatment.

2H. Strategies to Enhance Sustainability beyond Federal Funding

MA MIECHV explored Medicaid reimbursement strategies for MBD and Welcome Family. MA MIECHV worked with Medicaid to clarify use of the outpatient code for the delivery of clinical mental health services in the home. This strategy allowed MA MIECHV to sustain and expand the MBD program, using MIECHV funds to supplement the infrastructure. The MA MIECHV team developed a plan for Medicaid reimbursement for Welcome Family as a child-find activity billable as an EI screening visit. The team developed a presentation that documents EI screening rates and Medicaid reimbursement rates for similar short-term postpartum home visiting programs nationwide; preliminary projections of financial obligations to Medicaid, private insurance payers, and MDPH; and benefits of Welcome Family as an EI child-find activity. To further this dialogue, Medicaid has joined both MA MIECHV and Welcome Family Advisory Committees. Finally, MDPH is also working closely with state partners to establish Medicaid reimbursement rates for Community Health Workers.

MA MIECHV will continue to leverage state funds through the partnership with the Children's Trust to support the implementation of HFM in MA MIECHV communities. The Children's Trust receives support from state appropriations funds to provide home visiting for first time young parents. They continue to advocate for increased state funding for first time young parents and expand eligibility to other first time parents for home visiting services.

3. MAINTENANCE OF EFFORT CHART

Table 3. Non-Federal Expenditures

State FY 2016 (Actual)	State FY 2017 (Estimated)
Actual State FY 2016 **non-Federal (State General Funds)** expended for activities proposed in this application. If proposed activities are not currently funded by the grantee, enter $0. **Amount: $ __14,375,309_____**	Estimated State FY 2017 **non-Federal (State General Funds)** designated for activities proposed in this application. **Amount:** $ **___14,478,731_____**

4. EVALUATION DESIGN

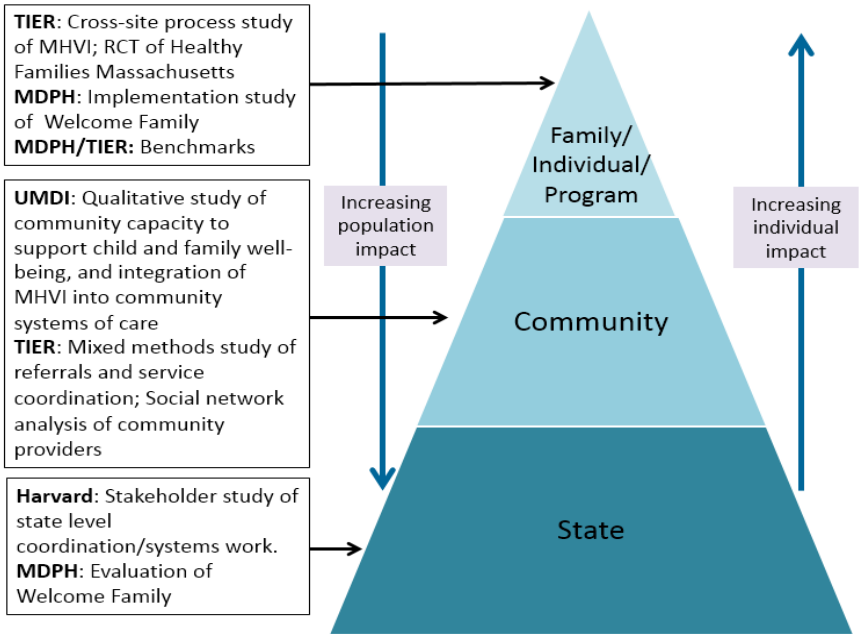
The MA MIECHV evaluation was designed to examine the processes by which MA MIECHV operates at three levels: 1) state, reviewing the organization and behaviors of relevant state systems and how these support sustainability; 2) community, understanding the assets and capacity of communities in which services are provided; and 3) program/individual/family, examining implementation, utilization, and outcomes of home visiting services.

4A. Evaluation Teams, Framework, and Rationale

MDPH contracted with three independent evaluation teams: Harvard Catalyst Community Health Innovation and Research Program (HC), University of Massachusetts Donahue Institute (UMDI), and Tufts Interdisciplinary Evaluation Research (TIER). To facilitate the integration and translation of findings, MDPH established a Data and Evaluation Team that included all three evaluators and multiple state agencies.

A modified version of Thomas Frieden's public health impact pyramid[ii] was used to conceptualize the integrated evaluation plan. Frieden's framework is based on a five-tiered pyramid that describes types of public health interventions, ranging from individual counseling and education at the top to socioeconomic factors known to impact health outcomes at the base. According to this framework, as interventions move from the top of the pyramid to the base, the interventions will have a greater population impact with less individual effort needed to be successful and sustainable. While interventions targeted at the base have a broader impact, a comprehensive public health system should develop interventions for each tier.

Figure 1. Framework for Integrated Evaluation



The adapted public health impact pyramid (Figure 1) visualizes processes at the state-, community-, and program/individual levels, while maintaining a focus on the relationships between population and individual impact. At the base of the pyramid are HC's state systems and sustainability evaluation and the MDPH evaluation of Welcome Family. The HC evaluation assessed current state agency, partner, and stakeholder coordination to facilitate and expand partnership development. HC also worked with state agencies to examine the feasibility of integrating data systems and ensure MA MIECHV as a sustainable program. At the community contexts assessment level, which fell under the purview of UMDI and TIER, UMDI collaborated with MA MIECHV communities to develop a definition of community capacity to support child development, evaluated the extent to which communities have the capacity to support child development, and assessed relationships among key early childhood initiatives. TIER examined community SOCs, and the ways in which MA MIECHV programs were embedded in those systems. At the top level of the pyramid, TIER evaluated the programmatic and operational activities of MA MIECHV, with a focus on program processes, operations, and integration into, and expansion of, existing SOCs. Further, building on an existing randomized-controlled trial (RCT) of the HFM model, TIER examined the long-term impacts of HFM on families. Additionally, TIER and MDPH collaborated on annual benchmark reporting. While each evaluation focused on goals and objectives to answer particular evaluation questions, the team worked collaboratively to ensure that evaluation questions and goals were addressed in a unified, comprehensive, and complementary manner.

4B. Evaluation Logic Model

MA MIECHV evaluators employed multiple research designs and coordinated activities to integrate and translate findings. The ultimate evaluation objective was knowledge generation that would lead to longer-term policy and program decisions, and each of the activities and outputs was designed to have immediate and intermediate benefits for programs (see Figure 2).

Figure 2. MA MIECHV Integrated Evaluation Logic Model

INPUTS: Evaluation teams (HC, TIER, UMDI), MDPH, EEC, DCF, CT, PAT, EHS, HFA, Healthy Steps, LIAs, Community Stakeholders, Families/Parents

	Objectives	Activities	Outputs	Outcomes
State processes, systems, & sustainability	▪ Evaluate four components of an integrated early childhood system of care: 1. Coordination and collaboration among state agencies 2. Pilot test of a universal one-time nurse home visiting program 3. A unified early childhood data system 4. System sustainability in evolving health care and early education environments	▪ Literature review ▪ Key informant interviews w/ state agency leaders ▪ Survey of HV programs and CFCEs to measure engagement with local service providers ▪ Community focus groups ▪ Mixed methods evaluation of Welcome Family ▪ Development of performance measures and identification CQI focus areas for Welcome Family	▪ Documentation of activities, progress and obstacles to development of an early childhood system of care ▪ Documentation of strategies to improve coordination and collaboration among state agencies ▪ Comprehensive Welcome Family evaluation report summarizing quantitative and qualitative findings	Understanding of activities to overcome state level barriers to systems development Information to guide future direction of Welcome Family and to optimize its role as an entry point into early childhood system of care Understanding of the capacity of communities to be responsive to the needs of families Understanding of the context in which MA MIECHV operates at the community level Understanding of the extent to which, and ways in which HV programs are embedded in a network of community services Knowledge of the effects of the HFM program on distal outcomes that reflect HFM program goals
Community capacity & systems of care	▪ Describe local contexts in which MA MIECHV operates, focusing on communities' capacity to support and promote optimal child development ▪ Provide feedback to MA MIECHV to improve operational and programmatic coordination and efficiency at the state and community levels ▪ Support use of evidence-based approaches at the level of local policy, community systems, and environmental change efforts ▪ Identify promising community-level issues, promising practices, and	▪ Qualitative study to describe local contexts in which MA MIECHV operates, focusing on communities' capacity to support/promote optimal child development and intersecting roles of three key state initiatives (MA MIECHV, CFCE, and Birth to Third Alignment Strategy) ▪ Initial cataloguing/coding of home visitor activities related to the linking of participants to community resources ▪ Focus groups with HVs to review initial findings and modify coding/analysis plans ▪ Social network analysis of community systems of care, and the relative embeddedness of MHVI in these systems ▪ Mixed methods study of MHVI role in facilitating families' connections to community services and resources	▪ Data driven definition of "community capacity to support child development" ▪ Identification of components that increase community capacity to support child development ▪ Identification of opportunities for state agencies to better support community capacity ▪ Surfacing of promising practices, and opportunities to create sustainable systems of care ▪ Provision of feedback to MA MIECHV to improve operational and programmatic coordination and efficiency at the state and community levels ▪ Creation of SNA maps of the connections among community providers within early childhood systems of care, and of SNA ego network maps that visualizing how MA MIECHV is embedded in these systems	
Family/ individual outcomes & program processes	▪ Aid MA MIECHV stakeholders at state and program levels to prepare/build capacity for implementation evaluation ▪ Describe program staff, participants, and services ▪ Investigate whether program effects found in a longitudinal follow-up study of the HFM model continue, and whether participation in the HFM affect family functioning as families move onto early childhood	▪ Collaboration with DPH to create/modify program MIS for performance management ▪ Provision of TA to state and program staff in data collection, documentation, and reporting. ▪ Assessment of the quality, consistency, and perceived effects of program ▪ Cross-site capacity building and implementation study ▪ Process/outcome study of MBD ▪ Qualitative study of PT Support Groups ▪ Addition of 4th & 5th wave of data collection to RCT of HFM to follow families as their children transition from preschool to elementary school	▪ Description of MA MIECHV participant profiles and program utilization ▪ Information about program utilization, and pre-post outcomes analysis of participants who enrolled in Moving Beyond Depression ▪ Narrative report on participants' perceived effects of the Parents Together Support Groups ▪ Assessment of long-term impacts on families participating in Healthy Families Massachusetts	

4C. Evaluation Questions

In addition to the research questions that guided each component, the evaluation team wrote a set of integrated evaluation questions to synthesize findings and ensure that evaluators collectively addressed each inquiry level described above. Questions are as follows (parentheses denote entity/entities with primary responsibility):

Statewide/Systems Level Questions (SLQ)

1. How well have state agencies coordinated to support developing a statewide SOC for pregnant and parenting families? (HC)
2. To what extent has MA MIECHV successfully implemented a universal one-time home visit that connects families to formal and informal community resources? (HC, MDPH)
3. To what extent have state agencies identified and implemented a fiscal plan to sustain the services and systems provided by MA MIECHV? (HC)
4. To what extent and in what ways have the changes at the state system level impacted community capacity to support child development? (HC, UMDI, TIER)

Community Level Questions (CLQ)

1. What are the characteristic components of communities that maximize capacity to support family health and development? (UMDI)
2. What is the capacity of communities to be responsive to the specific needs of the families? (UMDI)
3. To what extent have communities been able to develop a coordinated and responsive SOC in the context of MA MIECHV? (UMDI, TIER)
4. To what extent have community-level needs, initiatives and/or strategies informed the development of a statewide SOC? (HC, UMDI)
5. To what extent does MA MIECHV facilitate family engagement within early childhood SOC, and to what extent do systems of care respond to family needs? (HC, MDPH, UMDI, TIER)
6. For families participating in one of the EBHV models being implemented by MA MIECHV (HFM), what is the longer term impact of the program on family engagement within early childhood SOCs? (TIER)
7. What is the context in which MA MIECHV operates at the community level (e.g., adequacy/ availability of resources to meet family need)? (UMDI, TIER)

Program/Family/Individual Level Questions (ILQ)

1. To what extent are the MA MIECHV home visiting programs being implemented with fidelity to the program standards at the MA MIECHV, national model, and enhancement specific levels? (MDPH, TIER)
2. To what extent have the health, development, and education outcomes of MA MIECHV participants improved over the course of the initiative? (MDPH, TIER-Outcome Benchmark)
3. To what extent have MA MIECHV enhancements improved program capacity to strengthen family engagement in services and effectively respond to families' needs? (MDPH, TIER)
4. For families participating in one of the EBHV models being implemented by MA MIECHV (HFM), what are the longer term impacts of the program on health, development and education? (TIER)

4D. Evaluation Methods

Evaluation components are briefly described below; providing overviews of study design, data collection, and analytic methods. Additional information about sampling and estimated power is provided for MHFE-2EC. These overviews are followed by a table with activities, measures, target populations and frequency of data collection. Table 5 provides additional information about outcome measures used in MHFE-2EC and the MBD outcome study.

Harvard Catalyst Systems Study (HCSS)

The state systems evaluation included a literature review on systems coordination and early childhood SOC, and documentation of the vision and strategies regarding enhancing an early childhood SOC previously developed in Massachusetts. The study goals were to identify, examine, and address successes and challenges in building a sustainable, comprehensive early childhood SOC.

<u>HCSS Data Collection Methods</u>

HC evaluators conducted semi-structured interviews with state agency leaders and leaders in the field of early childhood systems building to assess the role home visiting plays and could play in an early childhood SOC. Interviews assessed perspectives of key stakeholders on the current landscape of systems building and what forces facilitated or impeded progress in systems building. In 2013, the MA MIECHV Systems Team developed and administered a survey to EBHV programs and CFCE's in MIECHV communities to assess levels of cooperation and collaboration among community-based organizations serving families with young children. Based on the results of this survey, HC conducted focus groups using a semi-structured format with LIA and CFCE program coordinators, providers from community health centers, and personnel from Head Start, WIC and the school system to explore potential ways to enhance system functioning and further explore issues identified in the survey.

HCSS Analytic Methods

HC evaluators reviewed the extensive academic and gray literature on systems coordination and early childhood systems of care, paying closest attention to the evolution of the early childhood system of care in Massachusetts, because that process would be the foundation for forward progress in the evolving early childhood environment in the Commonwealth. The team produced an annotated bibliography of noteworthy documents from their review. Information from key informants and focus groups was analyzed using thematic coding to identify overarching themes. This involved reviewing the notes from the focus groups and interviews and identifying sections of text that were linked by a common theme and then sorting them into categories. Analysis of the surveys of home visiting program and CFCE coordinators was conducted by the Ripples Group, a contractor of MDPH, and involved basic frequencies and descriptive analysis of survey responses.

MDPH Welcome Family Evaluation

With assistance and consultation from the HC evaluation team, MDPH conducted a comprehensive evaluation of the Welcome Family Pilot program. This evaluation utilized a mixed methods design to assess the operations, implementation and impact of Welcome Family by addressing specific questions related to: the universality of the program, its operations and outputs, and individual household, program and community/systems-level outcomes.

Welcome Family Data Collection Methods

Program data were collected from the four pilot sites (Boston and Fall River from September 1, 2013 through July 30, 2016 and Lawrence and Lowell from September 1, 2014 through July 30, 2016) and linked to electronic birth certificates (EBC) to provide the denominator for universality analyses. Comparisons were made between eligible families that did and did not accept a Welcome Family referral; families who accepted a referral that did and did not have a visit scheduled; and families who had a visit scheduled that did and did not complete a visit. Of note, among eligible families who did not accept a referral, data were not available on whether they were offered the program and declined or were not offered the program. As such, this group is referred to as "not offered/did not accept" in the results. All participants were asked to consent to be contacted by the evaluation team two to three months after the visit to answer questions about short-term health outcomes and visit satisfaction.

Qualitative data were collected through key informant interviews and one focus group. Fifteen interviews were conducted with program managers, nurses, hospital representatives, and members of the Advisory Committee. The focus group was conducted with ten participants from one pilot site.

Welcome Family Analytic Methods

Quantitative analyses of program universality and operations/implementation included only those participants whose program data linked with a corresponding EBC. The overall linkage rate was 94%. Comparative analyses were conducted using chi-squared tests for categorical variables and comparison of means for continuous variables. P-values less than 0.05 were considered statistically significant. Quantitative data were analyzed using SAS® 9.3.

Qualitative data were analyzed using structural and thematic coding using Atlas.ti. The coding process included:

- *First Cycle Coding:* Structural coding (coding by question or topic for certain questions); verbatim coding (coding using excerpts from respondent quotes); and process coding (coding using gerunds to capture activities).
- *Second Cycle Coding*: The codebook was updated and each interview was coded a second time according to the codebook to ensure they were coded using the same definitions and criteria.
- *Theming Data*: Codes that were relevant to the qualitative questions were grouped together into code categories.

UMDI Community Capacity Study (CCS)

UMDI conducted a three-phase qualitative investigation of community capacity to support child development. Each phase is described below, followed by a brief description of analytic methods for the whole study.

Community Capacity Study Phase I (CCSI)

The goal of Phase I was to define and understand community capacity and to build a foundation for direct assessment of community capacity. Data collection activities focused on gathering information from extant literature and key community stakeholders to gain a comprehensive perspective on the topic of community capacity. At the completion of Phase I, UMDI developed a comprehensive definition of community capacity to support child development and a complete data collection plan that would be executed in Phase II.

CCSI Data Collection Methods

EBHV coordinators and CFCE councils were identified as key data sources for Phase I because both serve families with young children and are embedded within MA MIECHV communities. Primary data collection activities consisted of in-person discussions with CFCE councils and phone interviews with MA MIECHV coordinators in each of the communities. Phase I data collection also included the implementation of an online survey designed to solicit additional input regarding the proposed definition of community capacity and contributing components. Survey recipients included members of the following groups: CFCE coordinators, MA MIECHV coordinators, Commissioner's Mailbox listserv, and the Professional Qualifications Registry.

Community Capacity Study Phase II (CCSII)

The goal of Phase II was to gain an understanding of general trends regarding community capacity and each community's strengths and areas in need of strengthening. The definition of community capacity developed in Phase I was utilized in Phase II. Phase II consisted of: 1) a review of concrete resources available and 2) the measurement of each communities' capacity to support the well-being of their children and families. The latter of these sought to address three main areas of inquiry: 1) general themes regarding capacity; 2) relevant information about the capacity of each community to support children and families, including each community's strengths and areas for growth; and 3) ways in which state agencies and communities can support community capacity.

CCSII Data Collection Methods

EEC identified the eight communities based on the population of children ages 0–5, selecting the five communities with the largest populations of children (Boston, Worcester, Springfield, Lowell, New Bedford) and the three with the smallest populations of children (North Adams, Southbridge, Chelsea). The communities were also chosen for their geographic diversity and their representation of both urban and rural areas. Given both the large size of Boston and diversity across city neighborhoods, the Mattapan neighborhood was selected to focus data collection to a smaller community within Boston. As part of the first assessment, UMDI undertook a review of publically available information and secondary data to assess availability of concrete resources to develop community-level profiles. For the second assessment, four entity types that engage in community-level work to address the needs of children and families were identified to serve as key data sources in each community. These were CFCE grantees, MA MIECHV LIAs, a key community agency (i.e., a "backbone organization"), and the municipal government. Primary data were collected directly from a variety of sources, including CFCE coordinators and councils, MA MIECHV coordinators, backbone organization key informants, and municipal employees in four relevant departments (early education, recreation, library, and public safety) via semi-structured in-person interviews, focus groups, and telephone interviews. Secondary documents such as strategic plans, grant applications, and municipal budgets were reviewed and used to add depth to the analysis where relevant.

Community Capacity Study Phase III (CCSIII)

Phase III extended the findings from the first two phases by examining the intersecting roles of three key state initiatives (MA MIECHV, CFCE, and Birth to Third Alignment Strategy [(B3]) tasked with collaborating to strengthen and make accessible an early childhood SOC at the community level. While each of these initiatives plays a role in supporting early childhood growth and development within the community, they are all also tasked with helping create community infrastructure to support an early childhood SOC.

CCSIII Data Collection Methods

To extend finding from Phase II, the eight communities that were a focus of Phase II were considered for selection in Phase III. Additional community inclusion criteria included: being assessed in Phase II as having strong evidence of community leadership, being a CFCE grantee, and being a B3 grantee. The justification for limiting Phase III communities to those studied in Phase II was to capitalize on UMDI's established relationships with previously assessed communities, as well as identifying communities with characteristics indicative of an existing infrastructure to support the well-being of children and families. Five communities met the criteria:

Boston, Lowell, Springfield, New Bedford, and Worcester. Taking into account the 15-month timeframe and the goal of an in-depth analysis, four of the five communities were selected for study in Phase III. Two of the four communities selected (Worcester and New Bedford) were just beginning work on B3, whereas the other two (Springfield and Lowell) had been working on B3 activities for at least one year. Boston was not selected due to its large size and the fact that only a single neighborhood was selected in Phase II. Coordinators for each of the grants were interviewed in person using a semi-structured interview protocol created specifically for this phase. The interview covered four main topic areas: 1) the grantee agency, 2) the grant and grant-related activities,
3) collaboration among the three grantees, and 4) a SOC within the community. CFCE and MA MIECHV coordinators in each of the communities were interviewed in the Fall of 2014. B3 coordinators in each of the communities were interviewed in the Fall of 2014 and Spring of 2015 to document progress in that period of time, given the relative newness of B3 projects in each community. Initial B3 interviews also helped researchers become oriented to B3 activities.

Community Capacity Study Analytic Methods

Notes and transcripts of interviews and focus groups were analyzed using a variation of open and then focused coding. Open coding consisted of reading each meaningful unit of text and interpreting both the verbal content and metacommunication. This practice resulted in conceptualization of an array of themes. Particular themes that re-occurred and were related to the general research area were then isolated. Once themes were constructed, data were analyzed again using focused coding, keeping each theme in mind and seeking out confirming and explanatory data. Examples that were counter to the proposed theme were also examined and used to refine themes. This type of content analysis is primarily rooted in grounded theory methodology.[iii]

Tufts Interdisciplinary Evaluation Research (TIER)

The TIER team was responsible for several evaluation components.

Facilitating Linkages to Community Resources study (FLCR)

FLCR investigated home visitors' roles in facilitating linkages to community resources. The goals were to: 1) describe programs' embeddedness in a SOC through examination of home visitors' records; 2) learn about mothers' connectedness to services in the SOC; 3) understand the role of referrals in facilitating connections to services; and 4) document the full range of behaviors home visitors exhibited in relation to participants' involvement in services, including those with the goal of *linking* to services, and those with the goal of *maintaining* or enhancing connection to services.

FLCR Data Collection Methods

TIER coded and analyzed program records from the PDS from a stratified weighted sample of 100 cases from five LIAs in four communities representing a variety of socioeconomic composition, racial/ethnic mixes, and rural/urban landscapes: Berkshire HFM, Berkshire PAT, Fall River HFM, Holyoke HFM, and Worcester HFM. Only female participants who began services between July 1, 2012 and June 30, 2014, and who participated in three or more home visits, were eligible. Each case file was an integrated dataset, encompassing a participant's history with the program as captured in each of three data sources: Home Visits, Secondary Activities, and Referral Records. Evaluators followed all home visitor activities with, or on behalf of, participants, observing the entire possible span of home visitor-client interactions about services. Quantitative analyses focused on 65 randomly selected cases, and qualitative pattern and thematic analyses focused on 20 randomly selected cases from the subset of 65.

FLCR Analytic Methods

Each record documented: 1) service type, 2) the goal reflected in the record, and 3) home visitor behaviors that supported those goals. Quantitative analyses were organized by one of 22 service areas. Sample statistics were based on data aggregated to the participant level (n = 65). Site differences in number of records and service type prevalence and intensity were assessed using chi-square and analysis of variance (ANOVA).

Twenty participant cases were randomly selected for in-depth qualitative analysis focused on mapping pathways of home visitors' involvement in participants' connection to services. Single-case matrices of all service discussions were created to summarize the goal of the service discussion; referral sources; whether or not a connection was made; and provision of low-level or advanced support by home visitors. Cross-case matrices were used for pattern identification. In-depth analyses illustrate the types of interactions home visitors and participants have while trying to achieve or maintain service connection, and exemplify the supports provided by home visitors.

Social Network Analysis of Programs Study (SNAP)

The SNAP study examined relational patterns of inter-organizational service networks within early childhood SOCs in four MA MIECHV catchment areas (Berkshire County, Holyoke, Fall River, and Worcester). Social network analysis (SNA) is a sociometric method used to examine the structures, patterns and outcomes of networks or groups.[iv,v,vi] SNA "network maps" offer a visual representation of connections both within and across nodes.[vii,viii] Study goals were to 1) characterize existing community-based early childhood SOCs, including the a) interactional and structural patterns among programs in each catchment area, and b) the relative embeddedness of MA MIECHV within those systems.

SNAP Data Collection Methods

TIER employed two network research designs in this study: 1) whole network and 2) ego network. Whole network studies analyze the totality of connections among all members of a network to understand overall network function, while ego network studies focus on the connections of one particular node within a broader network.[ix] The connection between nodes is the primary unit of analysis in both approaches. The nodes consisted of all family-serving programs in the four communities of the FLCR study. A modified version of the network questionnaire developed by PARTNER (Program to Analyze, Record, and Track Networks to Enhance Relationships[x]) was used to assess relationships among programs. The survey, administered online through Qualtrics, asked respondents about their program's characteristics, as well as relational and structural questions on the nature of their connections with other programs in their community, ranging from no connection at all to a collaborative relationship (Level 1 [L1], *no connection*; L2, *aware of program's role*; L3, *cooperation*; L4, *coordination*; L5, *collaboration).*

Programs were included in the sample if they: 1) provided direct services to at least one segment of MA MIECHV's target population (pregnant women, children 0-5, or families) that resided in the catchment area, and 2) were a nonprofit, medical or behavioral health provider, or government service. To identify programs for inclusion, TIER staff reviewed: 1) publically available organizational information, 2) LIA applications to MDPH, 3) results from home visitor focus groups, and 4) referral data for each catchment area. In total, 436 programs were surveyed.

SNAP Analytic Methods

Data were exported from Qualtrics to SPSS.22, cleaned, restructured into matrices and edgelists, and used for descriptive analyses. Data were imported into KUMU, an SNA data visualization platform, to develop network maps and examine structural and interactional dimensions of the SOCs, and the relative embeddedness of MA MIECHV in the SOCs, via the following SNA metrics; *1) network density*; number of existing ties between nodes in a network as a proportion of all possible ties, 2) *degree centrality*; total number of connections a member has to other members of the network, 3) *indegree centrality*; total number of incoming connections a node has, and 4) *eigenvector centrality*; assessment of how well connected a node is to other well-connected nodes.

MA MIECHV Program Implementation Study (MHVI-PI)

The MHVI-PI utilization-focused implementation evaluation was designed to 1) answer evaluation questions about program processes, operations, and integration into SOCs, and 2) respond to MA MIECHV stakeholders' data needs as program enhancements were developed, refined, and implemented. Evaluation activities fell into three broad categories: evaluation capacity building, describing program services; and assessing model fidelity.

MHVI-PI Data Collection Methods

To describe MA MIECHV program implementation, TIER relied on data derived from the MIS in which home visiting staff documented a range of activities and information, including: participant demographic characteristics, birth outcomes, services offered and used, and information about referrals. Data were entered regularly by staff in real-time online databases.

MHVI-PI Analytic Methods

Data were securely downloaded from the two main MIS sources at quarterly intervals. Data were downloaded as .csv files and reviewed initially in Microsoft Excel, then converted to .sav files for use in SPSS 22, in which all cleaning and analyses were conducted. Data translation activities included; data verification, cleaning, and de-duping; converting variables to appropriate analysis formats (e.g. converting string variables to nominal or numeric values); establishing date parameters for estimating timing of points of service, intervals, and durations; and estimating formulas that discretely aligned with the criteria of the Implementation study, such as formulating unique "if/then" statements to derive that a participant met or had not met a fidelity standard. Following the translation of these data, descriptive statistics of central tendencies were produced for the full sample, then across cohorts and program models.

Massachusetts Healthy Families Evaluation 2-Early Childhood (MHFE2-EC)

MHFE-2EC is a longitudinal follow-up evaluation of the Massachusetts Healthy Families Evaluation (MHFE-2), an RCT of HFM that assessed impacts within the first two years of program enrollment. MHFE-2EC added two waves of data collection (T4, 60 months post-enrollment and T5, 74 months post-enrollment). The goal

was to examine longer-term effects on the five HFM program goals: 1) preventing child abuse and neglect and promoting positive parenting, 2) achieving optimal child health and development, 3) encouraging maternal educational achievement and employment, 4) preventing rapid repeat births, and 5) promoting maternal well-being. MHFE-2EC explored a sixth HFM program goal: increasing participants' knowledge and ability to navigate early childhood SOC.

MHFE-2

TIER recruited participants from 18 HFM sites beginning in 2008. Eligible participants were female, at least 16 years old, conversant in English or Spanish, and new to HFM. Random assignment occurred at the site level through an algorithm in its MIS. To minimize denial of services, only 40% were assigned to the control group. Intervention group participants could receive HFM; control group participants could not receive HFM but were provided information about child development and referrals to other services. In total, 837 participants were randomly assigned (517 program –Home Visiting Services [HVS]; 320 control –Referral and Information Only [RIO]). From this group, TIER recruited a final sample of 704 mothers (61%, 433 program; 39%, 271 control) who participated in a T1 phone interview or signed a release allowing access to data from child protection, public health, transitional assistance, and education agencies. Mothers were also invited to complete in-person interviews.

MHFE-2EC Data Collection Methods

Recruitment for MHFE-2EC began in 2012; the sampling frame comprised the 684 mothers who completed T1 interviews. The aim was to recruit families prior to children entering kindergarten (T4), and when children were enrolled in kindergarten (T5). Outreach efforts included phone calls, emails, texts, letters, in-person visits and online searches. Data collection included a 30-minute telephone interview, and an optional 3-hour in-person interview that included a semi-structured interview, written questionnaires, observations of mother-child interactions, and assessments of receptive vocabulary and school readiness, measures of executive functioning, and an attachment-based narrative completion task (see Table 5). All interviews were administered in Spanish or English.

MHFE-2EC Sampling Plan

Of the original T1 sample, 72% (n = 490) participated in T4. Few differences were found between retained and attrited mothers based on T1 background and demographic characteristics and state administrative data. Mothers who remained in the study at T4 were more likely to speak English than mothers who left the study (78% vs. 66%, respectively) and were more likely to be in relationships with the fathers of their babies (50% vs. 41%, respectively). Mothers who were retained were less likely to have dropped out of HS at enrollment than mothers who attrited (20% vs. 29%, respectively). Approximately one year later, 445 of the 490 T4 mothers participated in T5 (91% retention). The 45 mothers who attrited from T4 to T5 were less likely to be Hispanic than mothers who remained in the study at T5 (20% vs. 36%, respectively), and were more likely to have received cash assistance before enrollment (35% vs. 19%, respectively), as well as food stamps both before (28% vs. 16%, respectively) and after (72% vs. 51%, respectively) enrollment. Inverse probability weights (IPW) were created to adjust for attrition biases over time.

MHFE-2EC Analytic Methods

Main Effects: Intent to treat (ITT) program effects were estimated, comparing T4 and T5 outcomes between HVS program and RIO control groups using random assignment status, regardless of whether mothers in the HVS group received home visits (13.5% of HVS did not). Analyses were conducted in Stata 14.2; each outcome was regressed on the program status indicator variable (1=HVS, 0=RIO) and control variables (maternal age at child's birth, maternal race/ethnicity, and child age and sex). Ordinary least squares (OLS) regression (for continuous outcomes) and logistic regression (for binary outcomes) were used. IPW with robust standard errors were incorporated to adjust for attrition and clustering of mothers within HFM catchment areas.

Moderated Effects: T1 maternal depression, mothers' history of childhood maltreatment, and T1 family support (dependability) were examined as moderators of program effects. Interaction terms between the indicator variable and each moderator were incorporated into main effects. Significant interaction terms between the HVS indicator and depressive symptomatology and childhood maltreatment were interpreted by examining the marginal effect of the program (i.e., HVS vs. RIO) within each subgroup. For family dependability, a continuous score, interactions were graphed and program effects tested for various values of family dependability (increments of 0.5 of a point).

Mediated Effects: The impact of HFM on mothers' adjustment at T4 and T5 was assessed via T3 program effects on parenting stress and college attendance. First, TIER examined if program status was indirectly associated with T4 mental health and T5 wellness practices and risk engagement through T3 parental distress. Second, TIER examined if HFM program status was indirectly associated with T4 economic dependence and T5 physical health through college attendance attainment at T3. Structural equation models (SEM) were conducted in Mplus 7.4. Parameters were estimated using full information maximum likelihood (FIML);[xi] and several fit indices were evaluated (comparative fit index [CFI], root mean square error of approximation [RMSEA], and standardized root mean square residual [SRMR]). The analytic sample for the mediation models included mothers with complete data at T3 who had data on at least one T4 or T5 outcome (n=331).

MHFE-2EC Estimated Power

Power analyses in Stata 14.2 were used to compute the required sample size for a one-sided test assuming a significance level of 5%, desired power of 80%, and a control group to program group sample ratio of .6 (i.e., n RIO/n HVS = .6). Using previous estimates of program and control group means and standard deviations and proportions, sample size estimates ranged from 351-538 (actual sample sizes for T4 and T5 ranged from 323-488).

Moving Beyond Depression (MBD)

The process and outcome evaluation of MBD was designed to assess: 1) screening and referral processes at the participating home visiting sites; 2) program delivery by MBD clinicians; and 3) selected outcome indicators.

MBD Data Collection Methods

A stand-alone Access database was used to document demographic information, services delivered, and assessments (see Table 5). Information was entered by eight therapists, on 488 clients, between 2013 and 2016.

MBD Analytic Methods

Site differences in number of MBD sessions were assessed using ANOVA. Bonferroni corrected post-hoc comparisons assessed pairwise comparisons between sites. To examine change in personal functioning outcomes over time, paired (dependent) t-tests were conducted, followed by repeated measures ANOVAs using generalized linear models (GLM) commands to assess sites' differences over time. All models were conducted in SPSS 22.

Parents Together (PT)

PT was a qualitative exploratory study aimed at: 1) identifying modifications made by facilitators to the program curriculum, which was designed for adults but being used with adolescent mothers; 2) exploring facilitators' and participants' perceptions of program outcomes; and 3) learning about mothers' program experiences. Analysis focused on interviews with group facilitators, and participant focus groups and questionnaires.

PT Data Collection Methods

Data were collected from the Brockton, Worcester, and Lawrence MA MIECHV sites. The study had three components: 1) interviews with group facilitators, 2) focus groups with participants, and 3) questionnaires completed by participants. Interview findings informed focus group interview questions.

PT Analytic Methods

Focus group and interview transcripts were coded using a qualitative data software package, Atlas.ti, which provides tools to assist with analysis.[xii] Within the software platform, segments of interview transcripts were selected and tagged with categorical codes.[xiii] The unit of analysis associated with this procedure is a thematic unit;[xiv] data were categorized according to emergent themes that were both common and unique across transcripts. The codes were inductively (grounded in the data) and deductively (interpretive) derived. Descriptive statistics were used to analyze the questionnaires, and these results informed the creation of a pre-and post-test measure to be administered to future PT groups.

Table 4. Data Collection Activities, Instruments, Target Populations, and Data Collection Frequency

Study	Data Collection Activity	Data Collection Instrument	Target Population(s)/Respondents	Data Collection Frequency
HCSS	Key informant interviews	Semi-structured interview protocol	State agency leaders and others with histories of working in the early childhood field (n=15)	Once
	Community focus groups	Semi-structured focus group guide	Representatives from 3 MA MIECHV communities (n=7 per focus group)	Once
WF	Program records	WF database	WF participants from all pilot sites (n=4173)	Ongoing
	Follow-up interview	Structured phone survey	WF participants from all pilot sites (n=327)	2-3 months post-visit
	Key informant interviews	Semi-structured interview protocol	Nurse, program manager, & referral source from each WF site, Advisory Committee members (n=15)	Once
	Focus group	Semi-structured focus group guide	Participants from 1 WF program (n=10)	Once
CCSI	In-person discussions	Semi-structured interview protocol	CFCE councils in 17 MA MIECHV communities	Once
	Phone interviews	Semi-structured interview protocol	EBHV coordinators in 17 MA MIECHV communities	Once
	Online survey	Online Community Capacity Survey	CFCE coordinators, EBHV coordinators, Commissioner's Mailbox listserv, & the Professional Qualifications Registry (n=448)	Once
CCSII	In-person interviews	Semi-structured interview protocol	CFCE coordinators & councils, EBHV coordinators, backbone organization	Once

Study	Data Collection Activity	Data Collection Instrument	Target Population(s)/Respondents	Data Collection Frequency
	Phone interviews	Semi-structured interview protocol	key informants, & municipal employees in 4 depts. (early ed, recreation, library, and safety) (n=59) in 8 MA MIECHV communities (Boston, Worcester, Springfield, Lowell, New Bedford, North Adams, Southbridge, Chelsea)	Once
	Focus groups	Semi-structured focus group guide		Once
CCSIII	In-person interviews	Semi-structured interview protocol	MA MIECHV, CFCE, & B3 coordinators in 4 MA MIECHV communities (Worcester, Springfield, Lowell, New Bedford) (n=18)	CFCE and MA MIECHV, once B3, twice
FLCR	MA MIECHV program records	MA MIECHV MIS	Records (n=11,096) for 100 MA MIECHV participants from 5 LIAs (Berkshire County HFM, Berkshire County PAT, Fall River HFM, Holyoke HFM, Worcester HFM)	Ongoing
	Focus groups	Semi-structured focus group guide	Program staff from the 5 MA MIECHV sites (n=53)	Once
SNAP	SNA survey	Online Qualtrics survey	Program directors in 4 MA MIECHV catchment areas (Berkshire County, Fall River, Holyoke, Worcester) (n=246)	Once
MHVI-PI	MHVI program records	MA MIECHV MIS	All MA MIECHV participants with usable data (n=4,719)	Ongoing
MHFE-2EC	Phone Interview	Structured survey w/std. measures (see Table 5)	Young first-time mothers referred to HFM (T4, n=490; T5, n=445)	T4 & T5
	Administrative records	State agency data	See above	Ongoing
	In-person visit w/ mother and child	Protocol w/observations, structured survey, std. assessments (see Table 5)	Young first-time mothers referred to HFM (Time 4, n=431; Time 5, n=405)	T4 & T5
MBD	Therapists' program records	MBD Supplemental Database	All MBD participants (n=488)	Ongoing
	Therapists' assessments	Standardized measures (see Table 5)	All MBD participants with Assessment & Session 15 (n=66)	Assess. & S15
PT	Phone Interview	Semi-structured interview protocol	PT facilitators in 3 sites (Brockton, Worcester, Lawrence) (n=5)	Once
	Focus groups	Semi-structured focus group guide	PT group participants in the above 3 sites (n=19)	Once

Table 5. Outcomes and Measures Used in MHFE-2EC and MBD, with Time Point and Reliability Coefficient

	T1	T3	T4	T5	Reliability
Goal 1: Prevent Child Abuse and Neglect by Supporting Positive, Effective Parenting					
Department of Children and Families (DCF) data					
Presence of Substantiated Maltreatment Report(s) (for Mother)	X				--
Presence of Substantiated Maltreatment Report(s)				X	--
Presence of Maltreatment Report(s) (Regardless of Substantiation)				X	--
Parenting Stress Index (PSI)[xv]					
Parental Distress		X	X	X	.82-.88
Parent–Child Dysfunctional Interaction			X	X	.84-.86
Difficult Child			X	X	.85-.86
Mother-Child Dyadic Synchrony (observed)[xvi]			X		--
Conflict Tactics Scale—Parent-Child (CTSPC)[xvii]					
Non-Violent Discipline (Chronicity)			X	X	--
Corporal Punishment (Prevalence)			X	X	--
Goal 2: Achieve Optimal Health, Growth, and Development in Infancy and Early Childhood					
Child's General Health			X	X	--
Number of Diagnosed Health Conditions (Past Year)				X	--
Emotional Dysregulation					
Emotion Regulation Checklist (ERC)[xviii]			X	X	.82-.84
Story Stem Completion Task[xix]				X	--
Bracken School Readiness Assessment[xxxxi]					
Composite Standard Score			X	X	.96
Descriptive Classification—Delayed			X	X	--
Receptive One-Word Picture Vocabulary Test (ROW-PVT)[xxii]			X		.91
Executive Functioning					
Working Memory (Corsi Block Task)[xxiii]			X	X	.70-.79
Working Memory (Digit Span)[xxiv]			X	X	.72
Behavioral Regulation/Self-Control (Head-Toes-Knees-Shoulders)[xxv]			X	X	--
Cognitive Flexibility (Dimensional Change Card Sort)[xxvi]			X	X	.75-.80
Parent's Involvement in Literacy-Related Activities (Home Literacy Environment Questionnaire; HLEQ)[xxvii]			X	X	.68-.75
Goal 3: Encourage Educational Attainment, Job, and Life Skills Among Parents					
Residential Mobility (Past Year)			X	X	--
Homelessness (Since HFM Enrollment)				X	--
Basic Resources (Family Resources Scale; FRS)[xxviii,xxix]			X	X	.84-.85
Mother Graduated from College (AA or BA)				X	--
Mother Completed Training Program				X	--
Mother is Employed		X	X	X	--
Goal 4: Prevent Repeat Pregnancies During the Teen Years					
Repeat Birth Within Two Years of First Child's Birth			X		--
Goal 5: Promote Parental Health and Well-Being					
Maternal Depression (Center for Epidemiologic Studies Depression Scale; CES-D)[xxx]			X	X	.91-.92
Personal Mastery (Pearlin Mastery Scale; PMS)[xxxi,xxxii]			X	X	.76-.79
Substance Use (Past Month; Youth Risk Behavior Survey; YRBS)[xxxiii]				X	--
Number of Treated Illnesses/Chronic Conditions (Past Year)				X	--
Number of Diagnosed Mental Health Disorders (Past Year)				X	--
Conflict Tactics Scale—Partner (CTS2S)[xxxiv]					
Partner-Perpetrated Intimate Partner Violence			X	X	--
Mother-Perpetrated Intimate Partner Violence			X	X	--
Goal 6: Increase Mothers' Knowledge and Ability to Navigate Early Childhood Systems					
Parent-Caregiver Relationship Scale (PCRS)[xxxv]			X	X	.90-.95
Parent Teacher Involvement (PTI)				X	.82
Advocacy					
Self-Advocacy (Household)				X	--
Maternal Advocacy (Educational Setting)				X	--
Awareness of Community Resources			X		--
ER/Urgent Care Visits for Child			X	X	--
ER/Urgent Care Visits for Mother			X	X	--
Additional Indicators used for Moderation and Mediation Analyses					
Family Dependability, Personal Network Matrix (PNM)	X				.67
Discomfort with Closeness subscale, Attachment Style Questionnaire (ASQ)			X		.82

	T1	T3	T4	T5	Reliability
Wellness Practices and Health Risk Engagement				X	--
Temporary Aid to Needy Families (TANF)			X		--
Supplemental Nutrition Assistance Program (SNAP)			X		--
Moving Beyond Depression					
	Session 1		**Session 15**		.
Edinburgh Postnatal Depression Scale[xxxvi]	X		X		.87
Interpersonal Support Evaluation List (ISEL)[xxxvii]	X		X		.77

Table 6. Timeline for Evaluation Activities

Study	Evaluation Activity	2012	2013	2014	2015	2016
HCSS	Literature/document review	X				
	Data collection	X	X	X	X	
	Synthesis of findings		X	X	X	X
	Reporting				X	X
WF	Evaluation design and data collection form development	X				
	Program launched	X				
	IRB submission and approval	X	X			
	2-3 month survey administration			X	X	X
	Development of program performance measures				X	
	Data cleaning, analysis, and reporting				X	X
CCS	Phase I data collection	X				
	Phase I data analysis and reporting	X				
	Phase II data collection	X	X	X		
	Phase II data analysis and reporting		X	X	X	
	Phase III data collection				X	X
	Phase III data analysis and reporting					X
FLCR	Evaluation design/ IRB submission and approval	X				
	Pilot coding scheme development/training	X	X			
	Pilot data coding and analysis		X			
	Focus groups		X	X		
	Coding scheme development/training		X	X	X	
	Coding				X	X
	Data cleaning, analysis, and reporting					X
SNAP	Evaluation design/ IRB submission and approval	X				
	Pilot survey development	X				
	Pilot survey respondent database development		X			
	Pilot survey administration			X		
	Survey development			X		
	Respondent databases development			X	X	
	Survey administration					X
	Data cleaning, SNA, and reporting					X
MHVI-PI	Data cleaning and analysis		X	X	X	X
	Reporting					X
MHFE-2EC	IRB submission and approval	X				
	T4 Outreach	X	X	X		
	T4 Piloting	X				
	T4 Data Collection	X	X	X		
	T5 Piloting		X	X		
	T5 Outreach			X	X	
	T5 Data Collection			X	X	
	Data cleaning, analysis, and reporting			X	X	X
MBD	Program Launch		X			
	Database development, training, TA, ongoing data entry		X	X	X	
	Coding, analysis, and reporting				X	X
PT	Evaluation Design /IRB submission and approval			X		
	Data collection			X	X	
	Transcription, coding, analysis, and reporting				X	X

Table 7. D89 Competitive Grant Evaluation Budget

Evaluation Activity and Brief Description	HC	TIER	UMDI	Total
Staff	$564,554	$2,548,248	$525,944	$3,638,746
Travel	$21,195	$46,300	$ 10,044	$77,539
Materials	$11,500	$53,270	$ 8,676	$73,446
Incentives or Participant Reimbursements	-	$130,000	-	$130,000
Other	$4,669	$13,850	$ 20,381	$38,900
Indirect	$90,173	$558,334	$ 65,305	$713,812
Subtotal	***$692,091***	***$3,350,002***	***$630,350***	***$4,672,443***

5. EVALUATION RESULTS

5A. Sample Description

The sections below provide descriptive information only for participants in quantitative datasets (for information about qualitative samples, see Section 4).

Welcome Family Evaluation

There were 34,132 live birth deliveries eligible for Welcome Family services during the evaluation data collection period. Among eligible mothers, the largest racial/ethnic subgroup was non-Hispanic (NH) white (43%), followed by Hispanic (27%) and NH black (18%). Most mothers were aged 25-34 years with a quarter (25%) of the population aged 25-29 years and a third (33%) aged 30-34 years. The largest portion of the population had a bachelor's degree or higher (38%) followed by high school graduates (21%). More than half of mothers were married (55%), and the majority was U.S. born (64%) and primarily spoke English (85%).

Facilitating Linkages to Community Resources Study (FLCR)

Quantitative analyses were conducted on a nested dataset consisting of 11,096 home visit, referral, and secondary activities records from February 2012 to March 2016, comprising 1,947 service discussions focused on 22 service types for 65 participants receiving services from five home visiting programs. Qualitative pattern and thematic analyses focused on 20 randomly selected cases from the subset of 65, comprising 587 records.

Social Network Analysis of Programs Study (SNAP)

The 450 programs surveyed were categorized using 15 service types; the most frequently occurring service types were behavioral health (16%) and early childhood (13%), and the least common were programs representing legal services (1%), police (1%), child protective services (2%), and domestic violence (2%). Completion rates were evenly distributed across communities and service types; 244 programs (54%) completed the survey. Programs with a formal relationship (as defined by having a Memorandum of Understand (MOU) or other formal letter of agreement) with MA MIECHV program(s) in their respective sites were more likely to complete the survey than programs with no formal relationship (p=.02).

MA MIECHV Program Implementation study (MHVI-PI)

An analytic sample of 4,719 participants was used to track program utilization across the 17 communities, 24 LIAs, and five fiscal years. Cohort (based on fiscal year participant enrolled, from FY12 to FY16) distributions were as follows: Cohort 1 representing 14% of the overall sample, Cohort 2, 17%, Cohort 3, 25%, Cohort 4, 24%, and Cohort 5, 21%. The majority of participants were female (96%). At enrollment, participants were, on average, 20.8 years old (range: 11.6-62.1); 56% of the sample were under 21. Approximately half of the sample was parenting at enrollment (51%), but among women who were teens at enrollment, only 40% were already parenting. The majority of participants identified their ethnicity as Hispanic (46%). The largest race subgroups were "Unknown, at 41% (the majority of participants who did not self-report a race were Hispanic), followed by White (29%) and Black (15%). The majority of participants was single (78%), unemployed (64%), insured through Medicaid (78%), and spoke English as their primary language (60%). A slight majority was currently enrolled in HS (22%), had a HS diploma (21%), or eligible for HS but not enrolled (12%).

Massachusetts Healthy Families Evaluation 2-Early Childhood (MHFE2-EC)

On average, MHFE-2EC mothers were 18.7 years old (*SD* = 1.3) at T1, 23.6 years old (*SD* = 1.3) at T4 and 24.9 years old (*SD* = 1.3) at T5. Children were 4.8 years old (*SD* = 0.5) at T4, and 6.1 years (*SD* = 0.5) at T5. Mothers were of diverse racial/ethnic backgrounds: 37% were NH White, 34% were Hispanic, 21% were NH Black, and 7% were NH other. The majority of mothers chose English as their preferred language (78%), and most were born in the U.S. (83%), with 69% born in Massachusetts specifically. More than half (55%) of the sample had substantiated maltreatment as a child, a little over a third (38%) met the clinical cut-off for depressive symptoms, and more than two thirds (68%) met partial or full criteria for Post-Traumatic Stress Syndrome. (See Sampling Plan for information about sample sizes).

Program Group Equivalency in MHFE-2EC

To ensure that HVS and RIO groups were equivalent and random assignment held within the MHFE-2EC sample, mothers in the two groups were compared on T1 background and demographic characteristics and state administrative data. Overall, few statistically significant differences emerged between HVS and RIO mothers at T4 and T5. In comparison to HVS mothers, RIO mothers were more likely to have been born in the U.S. (89.6% vs. 78.1%, respectively) and less likely to have been born in Puerto Rico (2.0% vs. 8.0%, respectively).

Moving Beyond Depression (MBD)

In total, 489 participants were referred. Of the referred participants for whom race/ethnicity was documented, more than half (52%) identified as Hispanic, 33% as White, 6% as Black, 4% as Asian, and 5% other, which includes multiracial. The majority of clients (71%) chose English as their primary language, and 25% reported speaking primarily Spanish at home. Most mothers reported being single (77%), and 19% were married. Mothers who were determined at initial assessment to be clinically depressed also exhibited poor functioning on two of the other measures administered at the assessment. On the PSI, almost half of the women (49%) scored at or above the 90th percentile, indicating a clinically significant level of stress. The overwhelming majority (65%) had an ACE score of 4 or higher; this cut-off has been linked with negative health and well-being outcomes across the life-course.

5B. Results by Evaluation Question

SLQ 1: How well have state agencies coordinated to support developing a statewide SOC for pregnant and parenting families? (HCSS)

A synthesis of information from HC's state systems literature review indicated that the concept of an early childhood SOC, definitions of what such a system must do and include, and ideas about how to create one that is comprehensive and sustainable have been under discussion nationally and in Massachusetts for many years. Review of documentation about the evolution of the early childhood SOC concept in Massachusetts suggested that there is broad agreement about what an early childhood SOC should look like, and there has been progress toward elements of such a system, but as conditions and leadership shifted, there was little consensus as to how to enhance and accelerate systems development in the Commonwealth. Despite efforts to conceptualize a comprehensive system and its necessary components, and attempts to operationalize the system, limited progress has been made towards system creation, in part due to changing administrations and lack of a political champion. Key characteristics required for systems development, including coalition building and centralizing community level resources, coordination of state level policies and programs, sustainable funding, and integrated data systems remain challenges in Massachusetts. At the same time, during the grant period, MDPH has made progress in cross-agency initiatives to support early childhood health and development, including the EfC project, which utilizes a collective impact approach to create safe, stable, nurturing environments for children, and the MECCS Project. Nonetheless, there remains a need for dedicated funding and personnel devoted to systems building at the state level.

SLQ 2: To what extent has MA MIECHV successfully implemented a universal one-time home visit that connects families to formal and informal community resources? (HCSS, Welcome Family)

MA MIECHV established Welcome Family in four MA MIECHV communities during the project period. There were 34,132 live birth deliveries eligible for Welcome Family services during the evaluation data collection period. Among them, 4,173 mothers accepted a referral to Welcome Family and 2,830 completed a visit. A higher proportion of mothers accepting a referral were Hispanic (33%) compared with those who were not offered/did not accept (26%), and a lower proportion of mothers who accepted were NH white (37%) compared with those who were not offered/did not accept (44%). Those who accepted a referral tended to be younger than those who were not offered/did not accept. Higher proportions of mothers who accepted had high school education or less, were not married, were publicly insured, were not U.S. born and were WIC participants. The proportion of eligible births accepting a referral increased over time. There was a threefold increase in the proportion of eligible births accepting a referral for deliveries occurring during the initial three months (September–December 2013) of the program compared to the last three months (April–June 2016) of the evaluation period (5% vs 15%).

Analysis of program data demonstrated successful efforts to identify family needs and make appropriate connections to formal and informal community resources. The Welcome Family nurse assessment includes five key content areas: Unmet Health Needs, Maternal and Infant Nutrition, Emotional Health (including depression and social connectedness), and Intimate Partner Violence. During Welcome Family assessments, a total of 15,707 concerns were identified (5.5 concerns identified per visit), and among them 54% were not receiving services to address that particular need. Among families with unmet needs identified in the five key content areas, 45% were referred to appropriate community services and 55% received a brief intervention from the nurse. A total of 3,794 referrals to community resources were offered at the time of assessment (1.4 referrals per visit). The majority of referrals were related to maternal and infant nutrition (26%) followed by family support programs (21%) and additional referrals (21%). The three most common referrals made were to SNAP, food pantry and child care.

Despite the success of Welcome Family in identifying family needs, ensuring successful connection to appropriate community services and supports was a challenge. In qualitative analyses, key informants identified limited system capacity to address identified needs as an important barrier; Welcome Family could provide referrals, but families were landing on waitlists and capacity issues were outside of the program's control. Welcome Family nurses discussed providing guidance to families on these capacity issues, providing families with multiple options in case of long waitlists, or explaining the referral processes to families as strategies to address these barriers. Additionally, referral follow-up completion is a focus of Welcome Family CQI efforts.

SLQ 3: To what extent have state agencies identified and implemented a fiscal plan to sustain the services and systems provided by MA MIECHV? (HCSS)

In the original MA MIECHV proposal sustainability was identified as a key part of the proposed system-building scope of work. However, soon after the formation of the interagency "systems and sustainability" team, under which the HC evaluation team worked, MDPH decided to consider sustainability separately and drop it as a charge of the systems team. MDPH leadership has been focused on sustainability of EC programs for many years. A summary of sustainability work and progress made during the competitive grant period is described in Section 2H.

SLQ 4: To what extent and in what ways have the changes at the state system level impacted community capacity to support child development? (HCSS, CCS, SNAP)

The aims of MA MIECHV were not only to provide direct services, but to be an active player in strengthening community-level comprehensive SOCs. The organizational structure of the initiative was collaborative: the planning task force and then Advisory Committee included representatives from DCF, DTA, EEC, Medicaid, and Children's Trust, and Executive Offices of Health and Human Services and Education. On some level, the implicit expectation was that these state-level collaborations (which were actualized to varying degrees over the course of the program) would be mirrored at the community systems level. MA MIECHV evaluators examined this question through different lenses. HC conducted focus groups aimed at elaborating on the system coordination questions asked in the EBHV/CFCE survey to further explore potential ways to enhance system functioning. UMDI examined the relationships among three key state initiatives, and TIER used SNA to explore the general community landscapes with regard to programs and initiatives.

Findings from all three components suggest some lack of alignment between state-level expectations and community-level collaborative work. Based on focus groups and a collective impact project to address homelessness (described in Section 2E), HC observed that multiple state and federal early childhood program policies (e.g., DHCD), rather than enhancing community actors' ability to work together, often result in community-level barriers, including rigid eligibility rules, an inability to share funds and a lack of integrated data systems. In their examination of the intended efforts of MA MIECHV, B3, and CFCE to be more collaborative, as required by the grants and dictated by MOUs, UMDI found that the majority of key informants, including MA MIECHV coordinators, viewed the home visiting initiative as largely programmatic and pointed to the fact that most of their work prioritized direct service provision. Data gathered throughout Phase III suggest that MA MIECHV does not perceive a place for them at the table in issues of infrastructure building, community engagement, and community alignment, nor did MA MIECHV interviewees particularly yearn for a place at the table. Interestingly, while MA MIECHV programs tended to describe themselves as insular and focused on service delivery, there was evidence of increased collaboration and broader community-level involvement by MA MIECHV coordinators in the four communities studied, largely in the form of networking, referrals, and information sharing (see CLQs 3 & 5).

Results from TIER's SNAP analysis provide an interesting backdrop to the HCSS and CCS findings described above. An SNA metric called *indegree centrality* was used to assess the number of incoming connections each program had at L3, L4, or L5 (i.e., denoting some kind of relationship). Table 8 shows the programs with the top five indegree centrality scores in each community. In only one community did the local CFCE emerge as a key player, and in no community did MA MIECHV emerge thusly (the survey was only sent to programs that provided at least some direct services, excluding B3 grantees). Two state-run agencies, DTA and DCF, consistently emerged as the most prominent members in their networks, with DCF ranked #1 in three out of the four. On one level, it is not surprising that these organizations emerge as "leaders" in their networks, given their concentrated power and comparatively large funding streams. But given that this survey was administered to *all* programs serving children and families in a given catchment area, the majority of which provided universal services (e.g., family centers, child care programs, hospitals, libraries, public schools), it is sobering that the program serving what is, in theory, a small subpopulation emerges as being the most central in these SOCs. This is striking when considering that the aim of a comprehensive early childhood SOC is arguably to *prevent* families from needing such intervention services. Note these analyses only assessed incoming ties; metrics utilizing both outgoing and incoming connections, which our 54% response rate precluded, may have painted a slightly different picture.

Table 8. Among Programs Characterized by Respondents as Having a Level 3, 4, or 5 Connection, Those with the Top 5 Indegree Centrality Scores, by Community

Rank	Berkshire County	Fall River	Holyoke	Worcester
1	**DCF (50)***	**Housing Authority (51)**	**DCF (50)**	**DCF (36)**
2	Behavioral Health(44)	**DCF (48)**	Workforce Development(38)	Adult Ed (31)
3	•Domestic Violence(42) •**CFCE (42)**	**DTA (42)**	Adult Ed (36)	Workforce Development (30)
4	•EEC/EI(35) •**WIC (35)**	Medical (41)	**DTA (35)**	• **DTA (28)** • Behavioral Health (28)
5	•**DTA (33)** •EEC/EI (33)	School Age (41)	Medical (33)	Arts, Recreation, Culture (28)

Note: *indegree centrality scores in parentheses. Government programs are in table by name; NGOs are represented by service type to preserve confidentiality. Bold type indicates state-run organization. DCF= Department of Children & Families; DTA=Department of Transitional Assistance, CFCE=Coordinated Family and Community Engagement; WIC=Women, Infants, & Children Food & Nutrition Service

CLQ 1: What are the characteristic components of communities that maximize capacity to support family health and development? (CCS)

Phase I of UMDI's assessment of community capacity focused on defining community capacity and its components as it relates to family health and child development by considering three main constructs: 1) community capacity is based on both a group's actual and perceived capability to meet their own needs and goals; 2) community capacity is dynamic, subject to the influence of new resources and community experiences; and 3) community capacity is inherently linked to the ability of communities to achieve positive outcomes. For the purposes of UMDI's study, community capacity was defined as: *"The interaction of individual skills and abilities (human capital), community-based resources, and shared connections and values (social capital) within a given community to support child development and improve the well-being of children and families."* A subset of components that increase community capacity were identified:

- Availability of concrete resources in the community to meet families' needs
- An understanding of community needs and resources
- Articulated goals and priorities
- Competencies needed to develop and implement strategies consistent with needs and resources
- A body of governance and/or social infrastructure that promotes and facilitates interagency collaboration
- Practices focused on maximizing community-wide prevention efforts, accessibility of resources (e.g., transportation, language, cultural), and community advocacy
- Community-wide initiatives that maximize well-being of children and families
- An identified process to monitor progress/results

CLQ 2: What is the capacity of communities to be responsive to the specific needs of the families? (CCS)

Phase II of UMDI's study utilized the definition of community capacity to assess the capacity of eight of the 17 MA MIECHV communities to support the well-being of children and families. The fact that these communities have been identified as the most at-risk communities in the Commonwealth is indicative of the capacity-related challenges that these communities face in adequately responding to the needs of children and families. While each community possessed its own capacity-related strengths and challenges and the overall capacity among the identified communities varied greatly, study finding indicate a number of emergent themes across the communities:

- *Availability of concrete resources***:** Access to resources in general was an issue across all communities. Interviewees identified barriers to families seeking services, including access to transportation, resident disengagement, distrust of nonprofit/municipal organizations, language issues, and lack of financial resources. Many families struggle to meet basic needs and this often takes priority over other educational, recreational, or supportive services. Smaller communities described more absence of resources than larger communities.
- *Understanding of needs and resources*: Backbone organizations were the most likely entity to have systematic, formalized methods for needs assessment. Efforts to gather information are often fragmented, with information remaining within a single agency, or shared primarily through informal networking. Communities often understand and document need based on what is known about participants accessing services through community-based programs, and the needs of those not connected to services are less well understood.
- *Goals and priorities:* Formal processes for articulating goals and identifying priorities generally occur as part of a larger strategic planning process. Goals and priorities are often dictated by funding source or by local, state, or federal mandates. When a strategic plan is in place, it is not always shared with the community to solicit feedback, increase awareness, and secure resident buy-in, and the extent to which efforts are guided by the goals and priorities articulated in the plan varies greatly.

- *Body of governance: presence of a backbone organization*: The type, role, and activities of a backbone organization varied by community. Backbone organization key informants felt that supporting collaboration among community agencies was a strength and collection, analysis, and use of data was a challenge.
- *Practices focused on maximizing prevention, accessibility, and advocacy***:** Efforts to maximize prevention were both explicit and implicit in the various community-level initiatives. However, immediate needs often take precedence over prevention efforts. All communities articulated to varying degrees the barriers that families faced in accessing resources and spoke about strategies to address these barriers. Key informants expressed the importance of advocating on behalf of families, but the levels at which they are comfortable doing so differed.
- *Community-wide initiatives***:** Initiatives that occur and are active within a community that has a well-established network serve as an opportunity for stakeholders to collaborate to move an agenda forward.
- *Process to monitor progress and results***:** Nearly all stakeholders reported that they lacked the capacity to gather meaningful data. Barriers to monitoring progress exist and efforts to improve capacity are limited.

Two additional findings emerged from the analyses of Phase II and Phase III data. First, the importance of institutional and community knowledge was observed in each community. When initiative or agency staff had strong ties to the community, their grant tended to be more embedded within the early childhood SOC. Second, institutional knowledge often translates to relationships between agencies that facilitate making referrals and coordinating supports. Families have varied, numerous, and diverse needs that can be difficult to meet because resources are not always easily accessed. When stakeholders are deeply connected to the community, accessing the resources their clients need becomes somewhat easier due to their personal ties to others in relevant positions.

CLQ 3: To what extent have communities been able to develop a coordinated and responsive SOC in the context of MA MIECHV? (CCS, SNAP)

As described in SLQ1, UMDI found that, for the MA MIECHV programs, direct service provision took precedence over any involvement in broader community- and systems-building efforts. This prioritized focus on is not surprising, given the reality that these programs are operating in communities in which families struggle to meet basic needs and support their children. The ability of these communities to work in a coordinated way to create a SOC, given such capacity-related challenges, was greatly limited. Part of the SOC in which the MA MIECHV is situated includes other home visiting programs, and other models of service delivery. Some MA MIECHV interviewees saw multiple home visiting programs as a benefit—there is even some active collaboration around transitions and referrals between programs. Others discussed some competition for families both within the MA MIECHV and between MA MIECHV programs and other home visiting programs. Too much perceived overlap in services creates barriers to collaboration and cooperation.

The efforts to coordinate home visiting programs in a single community are complicated by the lack of a consistent definition of "system of care" at the state and community levels. Policy makers at the federal, state, and community levels often envision a comprehensive, single SOC. Data gathered through the various phases of this study, though, suggest that mini-SOCs are created to meet the objectives of each initiative or grant. These mini-systems then create links to related mini-systems in order to network, collaborate, and refer. For example, MA MIECHV may create and support systems of care that include social service agencies (e.g., behavioral health), social welfare systems (e.g., WIC and cash assistance), and educational systems. The mini-system in which CFCEs are in the center might include public libraries, the early education community, the EI program, and some private businesses. And the B3 mini-system, with its particular focus on schools, might include entities such as the public schools, the early education community, other community stakeholders, and private businesses.

UMDI observed that one community—Lowell, a high-needs community with a highly diverse population, high rates of poverty and relatively poor maternal and child health outcomes—stands out as having a solid infrastructure to support a SOC. Lowell has a strong backbone organization, the Lowell Early Childhood Advisory Council (LECAC), which also serves as its CFCE Council and holds the B3 grant in the community. LECAC clearly is the leader of the early childhood community in Lowell and it works effectively to advance the agenda in that community; their function as a backbone organization is the ideal of the CFCE grant. They include all key stakeholders as part of their council, not only to collaborate and coordinate at the community level, but also to work together on the ground to meet the needs of families. With the LECAC as the lead, there is a strong focus on the importance of family engagement and putting children and families first. Furthermore, LECAC's continuity in the community and its strong presence in the early education arena ensure sustainability of a comprehensive SOC. Lowell is also a good example of the ways that mini-systems can link to each other and create larger SOCs. LECAC has actively engaged community stakeholders and partners, such as public libraries, educational settings, local government entities, the public schools, and even business leaders to be engaged in supporting children and families and/or directly supporting its mission and goals. Both LECAC and MA MIECHV are directly linked to early education and EI, as their work funnels families into those two systems. Additionally, both entities are linked to relevant mini-systems and serve as an important entry point to an early childhood SOC in the community.

Table 9. MA MIECHV Indegree Centrality Scores Relative to Highest Score, by Community

Site (# MA MIECHV programs)	MA MIECHV Score(s)	Highest Score in Network
Berkshire County (3)	24, 25, 29	50
Fall River (1)	33	51
Holyoke (2)	23, 25	43
Worcester (1)	17	36

Although SNAP examined these SOCs through a very different lens, results confirmed and complemented the UMDI findings. MA MIECHV programs across communities were fairly well embedded in their respective systems, and emerged for the most part in the middle of the pack in terms of network prominence. Table 9 shows the relative prominence of MA MIECHV programs in each of their respective community networks. All programs had indegree centrality scores that were around half the highest score in each network.

The ego-network maps presented in Figure 3 show the programs (represented by service type) with which MA MIECHV programs (in the center) have collaboration in three sample communities, each with a very different profile. In Community 1 (C1), MA MIECHV has many collaborative ties to other programs, suggesting a rich network of partnerships. However, only four service types are represented in this ego-network—early childhood, medical, econ/material, and family support, the last of which constitutes the majority of collaborations. C2 also has a high number of collaborations, with slightly more diverse representation in terms of service type; the MA MIECHV program in C2 also has a collaboration with a local high school and the area DCF office. Finally, while C3 has the least number of collaborations, their ego-network, which includes adult education and housing, has the widest range of services, and in this manner is more representative of the needs of the program's population. This program was the only one (out of seven) to be connected via a collaborative tie to a housing program. Many of the programs with which MA MIECHV is connected in C3 have higher indegree centrality scores (as indicated by their relative size). Grant-required collaborative relationships between CFCEs and MA MIECHVs were only evident in two communities.

Figure 3. Ego Network Maps, Collaborative Ties Only

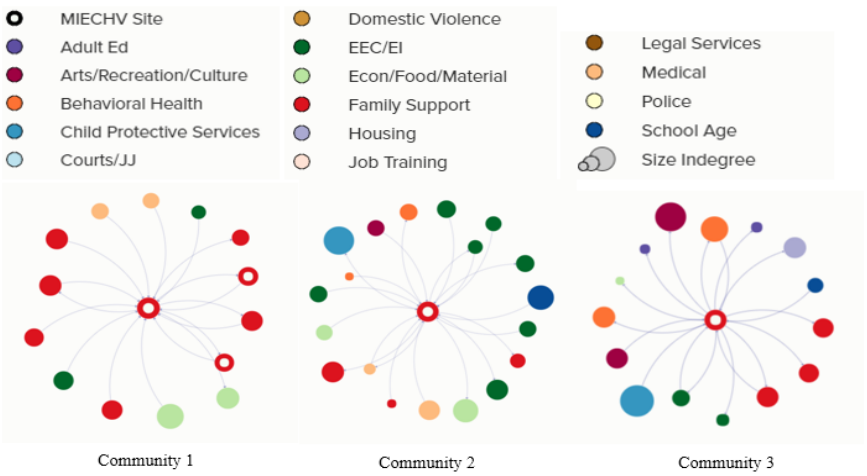
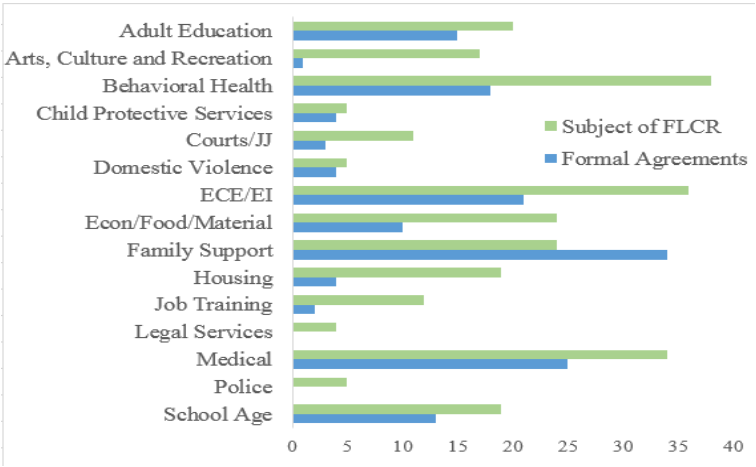


Figure 4 shows the distribution across all four communities, by service type, of programs participants are involved with (as gleaned though the FLCR analyses) compared to programs with which the MA MIECHV programs have some kind of formal partnership. Echoing the patterns observed in the SNA, the partnerships MA MIECHV programs have established with other programs do not always align with the services (which in this case can be seen as a proxy for need) participants are using. See, for example, the number of agreements with other family support programs (more agreements than referrals) in contrast to agreements with programs providing housing, job training, and economic services (more referrals than agreements).

Figure 4. Distribution, by Service Type, of Formal Agreements and Service Use (n=450)



CLQ 4: To what extent have community-level needs, initiatives and/or strategies informed the development of a statewide SOC? (CCS)

Findings from UMDI's study of the local contexts in which the MA MIECHV operates surfaced several challenges that have implications relevant to the development of a statewide SOC.

Increasing capacity to collect, analyze, and use community-level data effectively. All communities—including those with one or more strong backbone organizations—struggled with the collection, analysis, and use of data for assessing need and/or monitoring progress. Although most stakeholders clearly embraced the importance and utility of data to make decisions and monitor progress, their capacity to do so varies. Providing communities with TA opportunities related to data collection, analysis, and use will increase their ability to engage in these efforts and reinforce the importance of fully understanding the evolving demographics, economic profiles, and resource availability in their communities. Ultimately, however, state agencies may need to recognize that gathering and assessing community-level data is generally beyond the scope and capacity of community-level stakeholders.

Supporting collaboration. Although the data challenges described above preclude a more nuanced understanding of community-level need, state-level epidemiological and public health data demonstrate that the needs in the communities studied are substantial. Citing service utilization data and the existence of waiting lists for services, community stakeholders reasonably assumed that the needs of their communities surpass available resources, and data from TIER's FLCR study, described in the following section, more than support this perception. Faced with such a misalignment of needs and resources, many community stakeholders felt that the needs are simply overwhelming their capacity to respond. The reality in most communities is that service availability is driven by funding opportunities and not the actual level of documented need. Furthermore, stakeholders noted that barriers to accessing existing resources and obstacles to navigating local systems of care amplify the perception that services simply are not sufficient. Perhaps the most effective strategy to address the myriad challenges communities face is through collaboration. Interagency collaboration specifically helps to meet the needs of children and families in a variety of ways, including resource sharing and distribution, referrals, and coordinated efforts involved in such activities as spearheading initiatives or applying for grants. Key stakeholders in many communities described a historic lack of collaboration and interagency dynamics plagued with competitiveness and disrespect. Although evidence of progress in terms of collaboration within these communities is evident, more can be done.

Engendering collaborative relationships in the community can be challenging, especially in communities historically plagued by competitive interagency dynamics. Although the existence of a backbone organization facilitates increased collaboration, not all communities have a strong backbone organization capable of serving this function. State agencies have an opportunity to continue to support community collaboration by ensuring that grant initiatives focused on early childhood not only have complementary goals but also require coordination across grant initiatives. By continuing to de-silo initiative goals and priorities at the state level, community grantees will be encouraged to work together to develop strategies that are complementary rather than duplicative. MDPH and EEC, for example, have coordinated efforts related to home visiting and developing systems of care. Relatedly, MA MIECHV and CFCE grantees seem to be laying the groundwork for ongoing collaboration and partnership, in part as a result of this state-level partnership. These early signs of collaboration were reinforced by the current iteration of CFCE funding, which required collaboration with MA MIECHV.

In all communities studied in Phase III, CFCE had some clear and measurable connection to MA MIECHV and B3, though the intensity varied. MA MIECHV and CFCE staff tend to sit on each other's advisory councils, share information at meetings and via group listservs, and on some occasions partner on special events (such as Parent Cafés). Attendance at each other's meetings seemed to facilitate networking among affiliated agencies, and the main connection between CFCE and MA MIECHV in each community seemed to be this type of contact. Several MA MIECHV coordinators, however, indicated that their association with CFCE was occurring because it was mandated as part of their grant funding, not because the two programs have a natural overlap. Again, MA MIECHV programs are focused almost exclusively on service provision and, as such, the CFCE agenda can feel outside the scope of their own program's mission. The collaboration at the state-level in mandating that MA MIECHV and CFCE collaborate at the community-level seems to be somewhat effective, though there is room for improvement.

Supporting infrastructure and stability**.** The goals of the three initiatives studied in Phase III clearly demonstrate that state agencies (specifically EEC and MDPH) are committed to supporting coordinated efforts to establish and maintain an early childhood SOC. This is evidenced by the fact that the three initiatives are encouraged to work together to support families across the continuum of services. However, these initiatives have supported the development of mini-SOCs that connect and collaborate when possible, but do not necessarily have an established infrastructure that systematically ties them together. As state agencies explore how to better support connections across initiatives, it may be useful to understand the extent to which the types of entities serving as lead agencies affect the likelihood of establishing and sustaining a fully coordinated early childhood SOC. It is also important to note that these systems are not static. Involved agencies, and individual staff members, come and go, and funding changes can destabilize or strengthen relationships. Over time, the SOC will shift and modify as a result of a variety of factors, one of which is families' changing needs as a result of any number of community situations. The three initiatives are each well poised to respond to a shift in the system.

CLQ 5: To what extent does MA MIECHV facilitate family engagement within early childhood systems of care, and to what extent do systems of care respond to family needs? (CCS, FLCR, Welcome Family)

UMDI used interview and focus group data to assess the broader influence families have within service systems, and the extent to which MA MIECHV and other community initiatives are successful in connecting families to needed services;

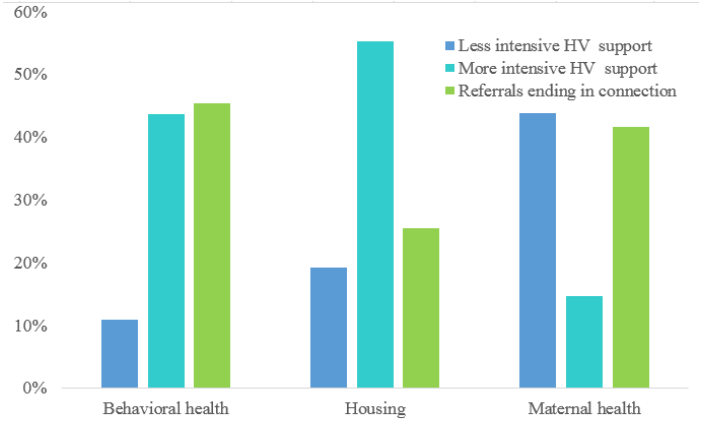
TIER conducted an in-depth quantitative and qualitative review of MA MIECHV program records to document home visitor activities related to connecting families to the SOC, and MDPH used referral data and key informant data to better understand Welcome Family's role as a key entry point into local service networks.

While all the key informants stressed the importance of having family or resident voice in their efforts, many also identified this as an area of weakness. UMDI observed little evidence of family voice and resident engagement at the community systems level. Even at a program level there was little, if any, evidence of family and resident input in assessing needs, setting goals and priorities, or developing strategies to maximize prevention, collaboration, or advocacy. When these tasks were undertaken, they were typically seen as the responsibility of council subcommittees, the full council, or staff.

UMDI's assessment of MA MIECHV's role in facilitating families' connections to community resources and services confirmed that home visiting functions as one possible entry point into a larger SOC. In addition to supported referrals, parent support groups, and parent education about resources, most home visiting programs have mechanisms in place to transition families leaving home visiting to go into the larger care systems in a community, such as transition planning, warm handoffs, and enrollment in early childhood education and care. In every community, however, key informants mentioned significant challenges in reaching subpopulations most likely to be in need of services. These hard-to-reach families often face barriers with respect to transportation, language, or transiency that make them particularly vulnerable to falling through the cracks of a SOC.

A similar picture emerged from the FLCR study. Across all service areas (n = 22), home visitors discussed an average of *30 different programs* with each participant (range =1-65). About 40% of records described activities dedicated to trying to connect participants to services. The majority of participants had at least one discussion pertaining to the following service areas: medical services (95%), economic and material assistance (92%), food and nutrition services (88%), housing (88%), maternal health (86%), health insurance (83%), and behavioral health services (77%). Mothers were more likely to enter the home visiting program already connected to food and nutrition (e.g., WIC), secondary education (e.g., high school), and maternal health services (e.g., prenatal provider), and were less likely to be connected to post-secondary education, behavioral health, early childhood education and care, economic and material assistance, and housing services. Home visitors had varying levels of success connecting participants to programs, and engaged in more or less intensive support activities, depending on the service area to which the referral was being made. Referral support activities were coded by type and ranged in level of effort, from information provision at one end of the spectrum to instrumental support (e.g., going with participant to housing office) and interagency case review at the other. Figure 5 shows an example of the range of "effort to yield" ratios. Referrals to behavioral health services required more intensive follow-up, but yielded a fairly high rate of connection to service. Referrals to maternal health services required little effort and also resulted in a high number of connections. The contrast between these service referrals and the referrals to housing services (high effort/low yield) underscore the findings across evaluation components concerning the high need for, and low supply of, housing. The descriptive nature of this study precludes drawing conclusions about *why* home visitors may have put forth greater efforts in reestablishing participants' connections to certain types of services; future research should pursue such lines of inquiry.

Figure 5. Intensity of HV Referral Support and Connection to Program, by Service Area



As described in SLQ2, quantitative results from the Welcome Family evaluation suggest that the program was successful at identifying and responding to family needs. In the qualitative evaluation, key informants discussed Welcome Family's role filling service gaps via its universal approach. Welcome Family was also described as a "connector" or "link" into the community and to services. For instance, Welcome Family was described as reaching out to those not connected to the system, who may be socially isolated; a point of connection to get caregivers to the doctor or to medical care; and a way for hospitals, who do not normally see new mothers after they leave, to know they are being seen and looked after. Echoing findings from the other studies, key informants reflected on how Welcome Family is limited by the capacity of the overall system in terms of its abilities to reduce gaps and meet service needs. However, they also described how Welcome Family can identify needed services among families.

Informants expressed conflicting opinions regarding for whom Welcome Family is an entry point– those who need little support or a lot of support. Representatives from three Welcome Family programs indicated that timing is key to whether Welcome Family can serve as an effective entry point; they felt the program should see families soon after they arrive home from the delivery hospitalization, but when they have been home long enough for questions to arise. Key

informants reflected that sometimes providing a referral is not enough, and suggested additional ways to support efforts to link families into services, including: using the feedback form for providers as a mechanism to close a loop with primary care providers and addressing access barriers discussed previously.

CLQ 6: For families participating in one of the EBHV models being implemented by MA MIECHV, what is the longer term impact of the program on family engagement within early childhood SOC? (MHFE-2EC)

See ILQ 4 for a summary of findings related to family engagement within early childhood SOCs.

CLQ6: What is the context in which MA MIECHV operates at the community level (e.g., adequacy/ availability of resources to meet family need)? (UMDI, TIER)

Findings from all three phases of UMDI's study underscore the importance of having concrete resources and the significant challenges communities confront in trying to meet those needs. The reality in most communities is that service availability is driven by available funding and not the actual level of documented need. Families, and the home visiting programs supporting them, are often stymied in their ability to access basic services. Housing availability and quality, for instance, were universally identified as an issue among the assessed communities, as were other concrete resources, including crisis and support services (especially mental services for young children). Even when concrete resources are more readily available, which was reported to be the case with services such as children's programming and parenting supports, many key informants noted, that availability of services does not always translate into accessibility. Community stakeholders articulated several notable barriers that families face in accessing resources, including: transportation, especially in rural communities; financial barriers associated with fees, co-pays, other costs for services; and linguistic and cultural barriers, particularly in communities with high immigrant populations. UMDI's assessment of community contexts revealed the importance of a coordinated and collaborative infrastructure of agencies and coalitions focused on getting families the support they need. In communities where there was an existing infrastructure or a key community agent to guide coordination, there was greater evidence of resource sharing, networking, referrals, communication, and other methods of collaboration. In communities without an existing infrastructure or organizing agent, stakeholders struggled to have a coordinated effort that addressed resource gaps and sometimes viewed other supportive initiatives as duplicative or competitive. To that end, while it is important to promote and/or require interagency collaboration, it is also important to build capacity around interagency collaboration in order to have a useful and sustainable impact.

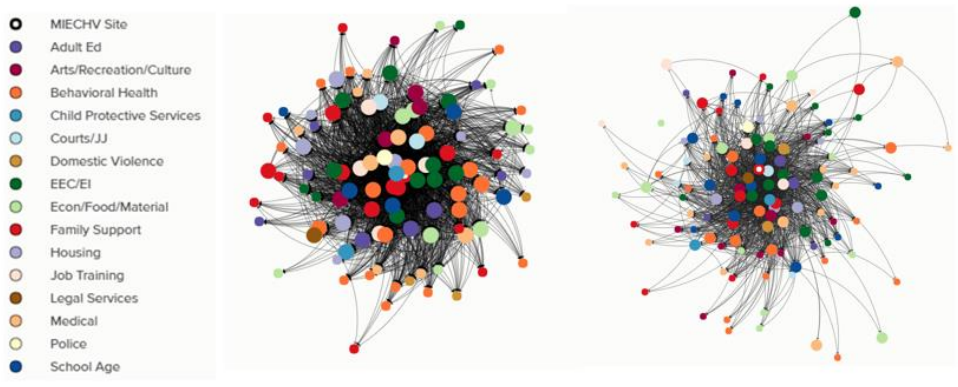
The SNAP study provides a "birds-eye" view of the local community contexts in which MA MIECHV programs are embedded. Despite the geographic and demographic diversity across the four community contexts examined, SNA revealed many similarities among them. All communities were characterized by a diverse network of programs and organizations providing myriad services to families and children. As mentioned in SLQ4, the most prominent members in each network were mostly state-run entities (with DCF generally emerging as the most central). MA MIECHV programs were, to varying degrees, deeply embedded in these networks.

Table 10. Network Density within Communities, Calculated on Connections at Levels 3, 4, and 5

	C1	C2	C3	C4
Potential Con.	5671	5671	6903	6903
Actual Con.	2246	2429	1858	1456
Density Scores	.3960	.4283	.2691	.2109

Table 10 shows each system's overall *network density*, which is an SNA metric commonly used to understand how well-connected the total network is. A network's density score refers to the number of existing ties between nodes in a network as a proportion of all possible ties. The network density score of the Berkshire County network (taking into account all connections at Levels 3, 4, and 5) is .3960, indicating that any two randomly selected nodes have an almost 40% chance of having a connection. As graphically represented in the SNA

Figure 6. Comparison of Communities with the Highest and Lowest Network Density Scores

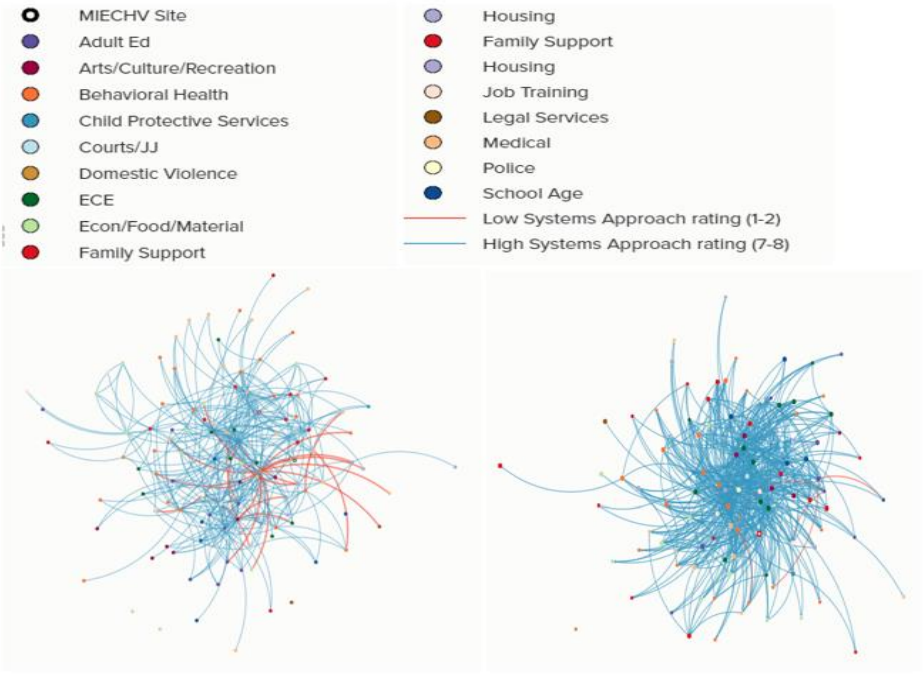


maps in Figure 6, the service network in Community 2 is significantly more dense than Community 4's network (Community 2 on the left and Community 4 on the right).

Answers to some of the more subjective survey questions also differed among communities. Here we provide two examples: 1) "Systems approach" and 2) Success of the community network.

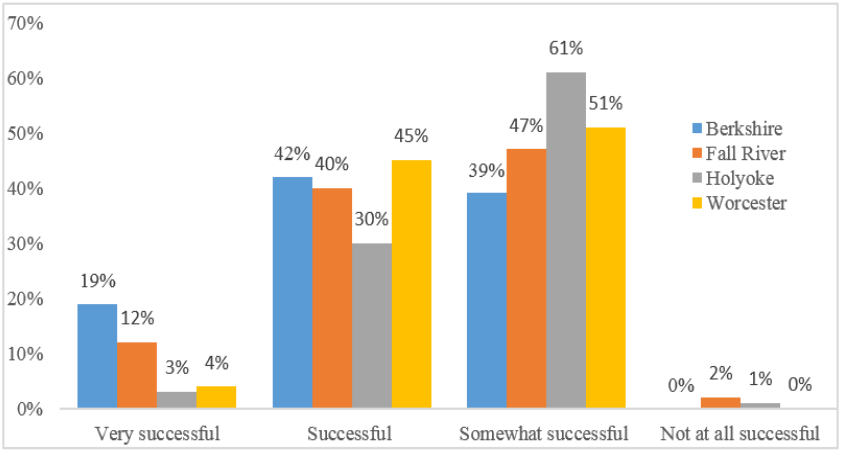
Systems approach: Once survey respondents selected the programs they had collaborative relationships with, they were asked to assess (on a scale from 0 ["not at all"] to 8 ["a great deal"]) the extent to which each of those programs seems to embrace a systems approach, using the following definition as a reference: *Systems Approach: This program seeks out opportunities to work with programs from different service areas and sectors in order to support the development of a comprehensive network of broad, flexible, and responsive services for families and young children in [Community Name].* Figure 7 graphically represents respondents' answers to this question: each of the maps below show only collaborative ties, with blue lines represent connections with high systems ratings, and red lines representing low systems ratings. What these maps suggests is that C2 not only has the densest network of connections, but that most collaborating members of the network have a favorable impression of their fellow network members' approach toward systems building.

Figure 7. Collaborative Ties with High and Low "Systems Approach"



Success. The communities differed in their answers to the survey question: "In general, how successful do you think the [Community Name] system of programs has been in meeting the goal of addressing the needs of families and young children?" Berkshire County had a more optimistic view of their community SOC's success, and Holyoke had a less positive assessment of their community network's success in meeting needs of families (Figure 8).

Figure 8. Survey Respondents' Assessment of Community SOC Success in Addressing Needs of Families



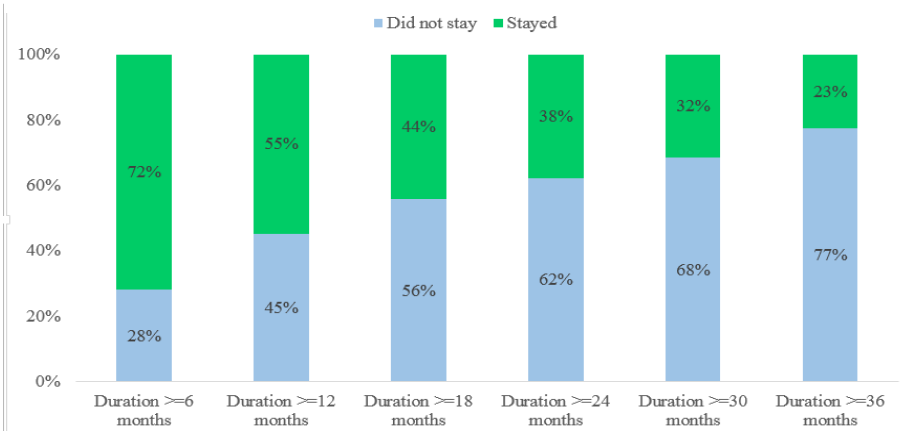
ILQ1: To what extent are the MA MIECHV home visiting programs being implemented with fidelity to the program standards at the MA MIECHV, national model, and enhancement specific levels? (TIER)

Home visiting program utilization. The majority (92%) of participants were enrolled in one program site for their entire duration in MA MIECHV (mean enrollments: 1.1, SD: 0.4, range: 1-7). On average, participants stayed enrolled in home visiting for 13.7 months (SD: 11.9; Range: 0-51.1). See Figure 9 for the proportion of participants who stayed enrolled for given increments of time.

A total of 117,244 home visits occurred during the reporting period. Participants received, on average, 25 visits during their program tenure (range: 0-137). Data related to participant attendance of parenting groups were less reliable across models; the total of 8,358 groups with a mean of 2.1 groups per participants (range: 0-63) is likely an underestimate. The mean home visit intensity for participants (# home visits/total duration) was 1.96 visits per month across models.

Of the 3,552 participants who had discharged as of the end of the reporting period, 12.4% "graduated" (i.e., the child aged out). Reasons varied for early discharge. Most often, families expressed that they no longer desired services (19.7%), were lost to follow-up (16.3%), or moved out of catchment area (10.6%). While this program completion rate seems low, it compares favorably to rates reported in other cross-model evaluations.[xxxviii]

Figure 9. Proportion of Participants who Remained in Program for Given Increments of Time (FY12-FY16)



Programs were successful in adding MIECHV required screenings to their service delivery structures. Of participants who had enrolled at least six months prior to the end of the reporting period, (n=4,265), 86% were screened at least once for depression, 84% for substance use, and 81% for domestic violence. Of participants in that subsample who had children (n=3708), 70% and 57% received at least one ASQ and one ASQ:SE, respectively. Note that utilization analyses reported here rely on MIS data, and for every EBHV model except HFM, the system they were expected to use was brand new to them; because the learning curve was quite steep, the data quality was not even across models.

MBD program utilization. Over the duration of MBD, 489 participants were referred, of which, 342 (70%) completed the initial assessment. Primary reasons for not completing the assessment (147 participants) were: participants did not respond to outreach, participants' stated lack of interest, and ineligibility due to demographic factors (e.g. age, language). Of the 342 completed assessments, 272 (80%) participants were eligible. Most of the ineligible participants (70) did not have major depressive disorder, nor had existing psychiatric conditions. Of the 272 eligible participants, 259 (95%) agreed to services. The 13 participants who declined services mainly stated lack of interest as a reason. Of the 259 participants that agreed to services, 239 (92%) completed at least one session. The majority of the 20 participants who enrolled but did not complete any session did not respond to therapist outreach. Of the 239 participants who completed at least one session: 48 (20%) received 1-3 sessions, 42 (18%) received 4-6 sessions, 36 (15%) received 7-9 sessions, 19 (8%) received 10-12 sessions, and 94 (39%) received 13-16 sessions. At the time of reporting, 238 participants have been discharged from program. Of these, 99 (42%) were lost to follow-up and 82 (34%) completed the program. Other reasons for discharge were participants moving, program closing, and therapist turnover. This process evaluation was limited in several ways: data from the mental health agencies never materialized as promised, the supplemental database built for therapists was plagued by technical setbacks; and while the outcome data were high quality, the process data were not.

ILQ 2: To what extent have the health, development, and education outcomes of MA MIECHV participants improved over the course of the initiative? (MDPH/TIER)

Massachusetts met the MIECHV goal of demonstrating improvement in at least 50% of the constructs in at least four of the benchmark areas by the end of the FY14 grant period (Table 11).

Table 11. MIECHV Benchmark Results FY14

Benchmark	Results as of October 2014
1: Maternal and newborn health	Benchmark met in 6 of 8 constructs
2: Child injury, neglect and maltreatment prevention	Benchmark met in 6 of 7 constructs
3: School readiness	Benchmark met in 9 of 9 constructs
4: Domestic violence reduction	Benchmark met in 3 of 3 constructs
5: Family economics & self-sufficiency	Benchmark met in 3 of 3 constructs
6: Referral coordination	Benchmark met in 5 of 5 constructs

ILQ 3: To what extent have MA MIECHV enhancements improved program capacity to strengthen family engagement in services and effectively respond to families' needs? (TIER)

Moving Beyond Depression. While the pre-post design precludes attribution of outcomes to the program, results are promising. Among participants who completed the assessment and Session 15, there was a significant decrease in depressive symptoms and parenting stress, and an increase in social support (Table 12). At Session 15 only 12% of mothers scored above the clinical cut-off for depressive symptomology (compared to 100% at intake), and 22% reported a clinically significant level of stress (compared to 49% at intake).

Table 12. Parental Functioning at Assessment and Session 15 (2013-2016)

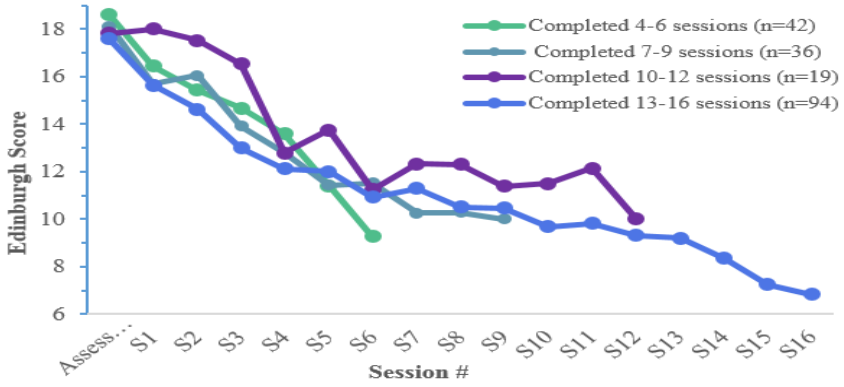
	Scores at Assessment		*Scores at Session 15*					
	M	***SD***	***M***	***SD***	***t***	***df***	***p value***	***95%CI***
Edinburgh	*17.58*	*3.39*	*7.46*	*5.22*	*15.46*	*82*	*<.001*	*8.81, 11.42*
Parenting Stress Index	*95.38*	*20.67*	*79.32*	*20.13*	*5.943*	*55*	*<.001*	*10.64, 21.47*
ISEL	*18.27*	*6.72*	*23.00*	*6.30*	*-5.74*	*65*	*<.001*	*-6.31, -3.053*

The more sessions a participant had, the lower the Edinburgh score at the last session (r=-.396, p=<.001). Even participants who did not complete every session experienced a marked reduction in reported depressive symptoms from the first to the last sessions (Table 13, Figure 10).

Table 13. Edinburgh Scores at Assessment and Last Session, by # of Sessions Completed (2013-2016)

Sessions Completed	***Edinburgh at Assessment***		***Edinburgh at Last Session***					
	M	***SD***	***M***	***SD***	***t***	***df***	***p value***	***95%CI***
4-6 sessions (n=42)	18.61	3.88	12.88	5.51	6.19	40	*<.001*	3.86,7.60
7-9 sessions (n=36)	18.11	3.75	9.36	5.50	8.05	35	*<.001*	6.54,10.96
10-12 sessions (n=19)	17.83	4.05	11.44	5.27	6.15	17	*<.001*	4.20,8.58
13-16 sessions (n=94)	17.59	3.68	7.74	5.43	15.74	90	*<.001*	8.61,11.10

Figure 10. Change in Mean Edinburgh Scores, by Session Completion (2013-2016)



Parents Together. With its emphasis on identifying and evaluating existing social network connections, and work toward strengthening and cultivating positive network ties, the PT curriculum led participants to place greater value on certain relationships that they had taken for granted, or reconsider how much to invest in relationships that they discovered were not reciprocal or rewarding. Almost all participants reported modifying their relationships, or the way they thought about their relationships, using the tools provided in the PT curriculum. A social network mapping exercise encouraged mothers to assess each of their relationships by emphasizing rational thinking and objective measures of what supportive relationships look like, rather than emphasizing emotions. Participants reported that they came to view relationships as more nuanced and complex; rather than cutting ties with individuals who came to be seen as challenging, some participants were willing to accept flaws so as not to sacrifice whatever support they did provide. Perhaps the strongest indicator that participants valued the social network maps was their continued use of the framework and principles they learned from the curriculum after the group had stopped meeting.

ILQ 4: For families participating in one of the evidence based models being implemented by MA MIECHV (HFM), what are the longer term impacts of the program on health, development and education? (TIER)

Main Effects. HFM program main effects are described in the table below. Table 14 includes statistically significant main effects at $p < .05$ or lower. There were no main program effects on Goal 1 or Goal 4 outcomes at either T4 or T5. For Goal 2, we found a significant program effect on children's working memory at T4: Children of HVS mothers scored higher on the forward version of the Corsi Block Task, attaining higher proportion scores during the task (M = 0.17 HVS, M = 0.15 RIO; Cohen's d = .19). At T5, HVS mothers reported less involvement in literacy-related activities relative to RIO mothers (M = 3.80 HVS, M = 3.97 RIO; Cohen's d = -.17). For Goal 3, HVS mothers were significantly less likely

than RIO mothers to experience homelessness since the time of HFM enrollment (28.3% HVS, 40.9% RIO). Analyses investigating overall program effects on Goal 5 revealed that HFM had a direct effect on T4 maternal depression and T5 substance use. HVS mothers reported fewer depressive symptoms in the past week compared to RIO mothers (M = 11.01 HVS, M = 13.18 RIO; Cohen's d = -.21). On average, HVS mothers spent fewer days binge drinking or using marijuana or cocaine in the past month (M = 0.14 HVS, M = 0.24 RIO; Cohen's d = -.23). For Goal 6, HFM had a significant impact on the prevalence of mothers' visits to the emergency room (ER) at T4 (assessing ER visits since child's birth). On average, 78% of RIO mothers visited the ER at least once since the birth of their first child compared to 66% of HVS mothers (OR = .53, p < .01). HVS mothers were more likely than RIO mothers to report self-advocacy (e.g., taking action towards resolving a problem) in household settings (63%, 50%, respectively).

Table 14. HFM Program Main Effects

	T4			T5		
	B (SE)	**OR**	**95% CL**	**B (SE)**	**OR**	**95% CL**
Goal 2: Achieve Optimal Health, Growth, and Development in Infancy and Early Childhood						
Exec Functioning: Working Memory	0.02 (0.01)*		0.00, 0.04	--		--
Involvement in Literacy-Related Activities	--		--	-0.17 (0.08)*		-0.34, -0.01
Goal 3: Encourage Educational Attainment, Job, and Life Skills Among Parents						
Homelessness (Since HFM Enrollment)		--	--		0.56*	0.33, 0.96
Goal 5: Promote Parental Health and Well-Being						
Maternal Depression	-2.17 (0.66)**		-3.56, -0.77	--		--
Substance Use (Past Month; YRBS)	--		--	-0.10 (0.05)*		-0.20, -0.00
Goal 6: Increase Mothers' Knowledge and Ability to Navigate Early Childhood Systems						
Self-Advocacy (Household)		--	--		1.74*	1.15, 2.63
ER Visits for Mother (Since Child's Birth)		0.53**	0.34, 0.83		--	--

Note. * p < .05; We present unstandardized regression coefficients (B) and standard errors (SE) with 95% confidence intervals (CI) for continuous outcomes and Odds Ratios (OR) with 95% confidence limits (CL) for binary outcomes.

Depression and Maltreatment (Dichotomous Moderators). Findings indicated that the main effect on depression at T4 was strongest for mothers with clinically significant levels of depression at T1 (M = 13.50 HVS, M = 17.88 RIO; Cohen's d = -.38). At T5, several program effects were found among mothers with clinically significant levels of depression at T1. Notably, among mothers with high depressive symptoms at program enrollment, HVS mothers were less likely than RIO mothers to report using corporal punishment in the past year (37.2% HVS, 52.7% RIO), reported fewer acts of partner-perpetrated domestic violence in the past year (M = 0.79 HVS, M = 1.21 RIO; Cohen's d = -.35), reported less frequent substance use in the past month (M = 0.13 HVS, M = 0.31 RIO; Cohen's d = -.36), and were more likely to report advocacy in educational settings (61.2% HVS, 38.0% RIO). One program effect emerged for mothers who reported low depressive symptoms at T1: HVS mothers were more likely to have obtained a college degree by T5 than RIO mothers (7.6% HVS, 0.9% RIO).

The most favorable program effects were found among mothers *without* a history of childhood maltreatment: among mothers without childhood histories of maltreatment, HVS mothers were 83% more likely to have completed a training program at T5 relative to controls (33.6% HVS, 18.4% RIO) and reported less IPV (M = 0.76 HVS, M = 1.41 RIO; Cohen's d = -.54 for partner-perpetrated, M = 0.75 HVS, M = 1.12 RIO for self-perpetrated; Cohen's d = -.43). Children of HVS mothers exhibited superior receptive vocabulary (M = 108.32 HVS, M = 104.44 RIO; Cohen's d = .41) and self-control (M = 23.04 HVS, M = 17.38 RIO; Cohen's d = .31) relative to children of RIO mothers at T4. On the other hand, T4 dyadic synchrony of mothers with a history of maltreatment and their children was lower in the program group relative to controls (M = 2.70 HVS, M = 3.14 RIO; Cohen's d = -.46), and mothers with a history of childhood maltreatment were more likely to report self-perpetrated IPV at T5 if they were in the HVS group (M = 1.12 HVS, M = 0.88 RIO; Cohen's d = .45). HVS mothers who had childhood maltreatment reports were more likely to report taking their child to the ER or urgent care in the past year (57.4% HVS, 37.7% RIO) and had children with higher emotional dysregulation scores (M = 1.94 HVS, M = 1.69 RIO; Cohen's d = .46), both at T5.

Family Dependability (Continuous Moderator). We found that HFM program effects varied according to T1 ratings of family dependability for several outcomes:

- Among mothers with low levels of family dependability (i.e., scores of 2 or lower), mothers in the HVS group had significantly lower parenting stress (in 2 of the 3 T4 subscales: parent-child dysfunctional interaction, difficult child) than RIO mothers.
- HVS mothers reported lower involvement in literacy activities at T4 than RIO mothers at higher levels of family dependability (score above 2).
- Children of HVS mothers displayed more emotional dysregulation at T5 than children of RIO mothers at low levels of family support, but less dysregulation when family dependability was high.

- HVS mothers reported more confident and collaborative relationships with their child's caregivers at T5 than RIO mothers at lower levels of family dependability (scores lower than 1.5).
- HVS mothers were significantly more likely than RIO mothers to use the ER or urgent care clinics for their children at T5 in instances where family dependability was low.

Mediated Effects Model 1: Parental Distress Mediation Model**.** Relative to RIO mothers, HVS mothers reported lower levels of parental distress at T3, and in turn, lower levels of parental distress were negatively associated with mothers' poor mental health at T4 and positively associated with mothers' wellness practices at T5. T3 parental distress significantly mediated the association between HFM and T4 poor mental health (95% CI [-.144, -.007]), as well as between HFM and T5 wellness practices (95% CI [.001, .021]).

Mediated Effects Model 2: College Mediation Model. HVS mothers were more likely than RIO mothers to have completed one year of college at T3, and in turn, completing one year of college at T3 was negatively associated with economic dependence at T4. T3 college attainment significantly mediated the association between T1 program effects and T4 economic dependence (95% CI [-.313, -.004]).

6. EVALUATION SUCCESSESSES, CHALLENGES, AND LESSONS LEARNED

6A. Strategies that Facilitated Implementation of the Evaluation

While having multiple evaluators on the same project presented some challenges, it also provided a rich collaborative environment in which researchers from different disciplines could learn from, and inform, each other's work. Establishing the MA MIECHV Data and Evaluation Team facilitated the integration and translation of findings, and provided a venue for the three evaluators, their funders and MA MIECHV program administrators to meet quarterly to monitor progress, share information, and collaborate across evaluation teams. The evaluators worked together to ensure that data collection efforts were complementary rather than duplicative, and, when possible, employed similar terms and language to allow for data synthesis and comparisons across studies. Evaluators strategically built upon previous evaluation findings during the project period. The TIER and UMDI studies were particularly complementary; findings from each have informed the new Formula Grant evaluation, being conducted jointly by the two research groups. There also have been close working relationships among the evaluators, the MA MIECHV Data Team and MA MIECHV program administrators and staff.

6B. Successes that Resulted from the Evaluation

The three tiered approach to the MA MIECHV evaluation provided for a deeper understanding of MIECHV's impact on Massachusetts families and the early childhood SOC. The collaborations between evaluators and MA MIECHV administrators, and the open lines of communication that characterized them, have made program adaptations possible across multiple implementation areas. This allowed MA MIECHV to make informed decisions to modify implementation timelines, modify data systems, develop targeted training to support LIAs and make course corrections to best meet the needs of families in MA MIECHV communities.

The continuous use of program data and feedback loops to the LIAs lead to the development of systems to support LIAs with data collection and reporting. Through analysis of benchmarks, the MA MIECHV Data Team developed CQI practices that were integrated into the overall MA MIECHV CQI Plan. The development of a formal CQI process has improved data collection and allowed LIAs to better understand their data and make meaningful use of data to improve program practices at the LIA-level. The evaluation also identified gaps in training.

At the program level, the information sharing with the evaluators has allowed home visiting staff to reflect on their efforts to build strong community collaborations and successfully connect families to services they need. Home visitors note that data collection and entry are a significant burden given the pressing needs of families and challenge navigating community systems. Evaluators felt that the home visiting data were valuable to them, and therefore they strived to make the data valuable for the LIAs. Staff felt appreciated that evaluators were comprehensively looking at their data and noticing their efforts to serve families. Furthermore, evaluators used program data to draw connections for the programs and provide opportunities for meaningful use of program data.

At the participant-level, evaluation efforts have improved program practices to better support families. One success was the improvement of screening and referral rates for depression, domestic violence, social connectedness and substance use. Over the course of the project period, the proportion of screens that were completed at the appropriate time frame and the proportion of positive screens with a documented referral to services have increased consistently across the four screening areas. The successes in these areas are due to use of program data to identify areas for improvement that were addressed through LIA-level CQI processes, training, and technical assistance. As a result, home visitors feel better equipped to identify and respond to family's needs.

6C. Challenges Encountered in Conducting Evaluation and Deviations from Approved Evaluation Plan

The most significant challenge encountered during the grant period concerned the quality of the program data; namely the multiple MIS used by LIAs to document program services. For every EBHV model except HFM, the MIS they were expected to use was brand new to them, and even for HFM, the new data collection required by the grant greatly increased

their data burden; for those programs new to the systems, the learning curve was extremely steep, with staff turnover further exacerbating this problem. Challenges related to the MBD data collection were numerous; data from the mental health agencies never materialized as promised, the supplemental database built for therapists was plagued by technical setbacks; and while the outcome data were fairly high quality, the process data were not. As a result of these various challenges, TIER evaluators were required to spend much more time than anticipated on evaluation capacity building and TA. Additionally, these data challenges resulted in two deviations from the original evaluation plan, as follows:

Changes to FLCR and SNAP samples. The original intended sample included the following communities/models: Berkshire County/PAT and HFM; Chelsea/HFA and HS; Fall River/HFM; Holyoke/EHS and HFM; and Worcester/HFM. Because the ETO data system did not allow for detailed recording of referral information, we had to drop both of the Chelsea sites from our analyses. We also had to drop the Holyoke EHS site from our sample: the home visitors never fully adjusted to the PDS, and their data were far too sparse to use for this level of analysis

Changes to the MHVI-PI study. A key original aim of this evaluation component was to measure service utilization, including an assessment of how each of the program models delivered services in relation to their individual sets of national model, state, and local standards and expectations. Because of the aforementioned data quality issues, such analyses were not possible across all models, and these aspects of the MHVI-PI were necessarily scaled back considerably.

6D. Lessons Learned

MA MIECHV comprised five EBHV models, 21 LIAs, and 24 programs, across 17 communities with different socioeconomic profiles. Programs varied greatly in terms of implementation, foci, and documentation practices. In many ways, the integrated evaluation mirrored the complexity of the initiative itself, with multiple levels of inquiry and appertaining research designs. Described here are three of the most salient lessons learned through this evaluation process, pertaining to administrative data, evaluator-model collaboration, and adaptability.

Building program capacity to collect data without duplicating efforts or overburdening staff is crucial to evaluating home visiting programs. Three lessons around administrative data systems were: 1) creating data systems and training users should be a first step in process data monitoring and accountability, not a simultaneous step; 2) when multiple models are using multiple systems, efforts should be made to standardize variables across models from the outset; and 3) efforts should be made to minimize data burden. Many programs were required to document data in more than one system (e.g., EHS programs were held accountable for two sets of federal performance measures) and this duplicative data entry resulted in poor quality documentation across systems. MA MIECHV made significant progress toward building more comprehensive and better aligned systems with these lessons in mind.

The MA MIECHV Data and Evaluation Team, in collaboration with the models, worked hard to support LIAs' understanding of the value of accurate documentation, and how it could be used not only to demonstrate program efficacy, but also to improve program practices. Integrating evaluation and CQI processes, and working with models to align expectations regarding monitoring and accountability proved critical to this endeavor.

Finally, the MA MIECHV evaluators learned to embrace a spirit of flexibility. MA MIECHV, as are even the most tightly-designed programs, was beset by what Jacobs wryly describes as "intrusions of context",[xxxix] e.g., the aforementioned difficulties standardizing data systems, staff turnover, slower than anticipated enhancement roll-outs, shifts in the political landscape, and so on. For some of the evaluation components, research methodologies needed to be tweaked quite substantially. Evaluators needed to maintain a stance of adaptability and work collaboratively to solve design-related problems.

7. CONCLUSIONS, IMPLICATION OF FINDINGS, AND RECOMMENDATIONS

There are numerous key findings, implications, and recommendations resultant from the nine evaluation components; this section highlights only those that best lend themselves to cross-study synthesis and interpretation.

7A. Conclusions

Key Findings at the State Level

Despite the fact that there is broad agreement about what an early childhood SOC should look like, and there have been steps toward elements of such a system, changes in leadership and lack of political will have impeded progress in this area. While key characteristics required for systems development, including coalition building and centralizing community level resources, coordination of state level policies and programs, sustainable funding, and integrated data systems remain challenges in Massachusetts, there has been discernible progress in many areas. MDPH was able to establish Welcome Family in four MA MIECHV communities. Over the grant period, Welcome Family experienced an increase in the proportion of eligible births accepting a referral, thus improving efforts to identify family needs and make appropriate connections to formal and informal community resources, while simultaneously serving as an entry point into the early childhood SOC. MDPH also has made progress in cross-agency initiatives to support early childhood health and development, including successfully applying for and implementing the Essentials for Childhood project and the Early Childhood Comprehensive Systems Project.

State agency managers and community providers cited the drawbacks of categorical funding and accountability structures at both federal and state levels that discourage holistic system approaches. State agencies have an opportunity to continue to support community collaboration by ensuring that grant initiatives focused on early childhood not only have complementary goals but also require coordination across grant initiatives. By continuing to de-silo initiative goals and priorities at the state level, community grantees will be encouraged to work together to develop strategies that are complementary rather than duplicative.

Finally, the efficient delivery and evaluation of integrated services for young children requires better data, and technological advances are making secure data linkages more feasible. The implementation of an integrated early childhood data system has a variety of logistical and legal challenges. Efforts to improve mechanisms for data-sharing across agencies and services to enable children and families to be tracked across time are crucial to support data driven decision making and planning of policies and programs to support young children and their families.

Key Findings at the Community Level

Policy makers at the federal, state, and community levels often envision a comprehensive, single SOC in each community. In reality, however, as the FLCR, SNAP, and CCS data suggest, something considerably more complex exists at the community level; networks and "mini-systems" of programs, connected to each other for a variety of reasons. Some mini-SOCs, like the MA MIECHV/CFCE/B3 alliances studied by UMDI, are created to meet the objectives of a particular initiative or grant. Some collaborations are legacies of past initiatives, continuing despite dissolution of funding and grant mandates because of personal relationships, perhaps, and/or shared commitment to common goals. In the absence of state- or community-level policies, initiatives, or interagency agreements, there are also mini-systems that form more organically, driven by informal personal and professional connections across and within service sectors. And there are mini-systems that arise out of a need to manage the potential for competition between programs that, as one of the UMDI interviewees stated, are "too alike" (such as multiple home visiting programs in one community). In theory, these mini-systems are vital contributors to larger SOCs. They also are vulnerable on a number of levels: grant-funded systems often are not sustained once that funding expires or shifts, mini-systems that depend on personal relationships are vulnerable to changes in staffing, and systems comprising programs providing similar services are useful for managing transitions and referrals between programs, but lack the service type diversity required by a comprehensive SOC. Few of the mini-systems examined across studies actually reflected, in terms of their service-type composition, the multiple needs of the home visited populations.

Study findings indicate that communities varied greatly regarding interagency collaboration and whether a larger infrastructure was in place to support children and families. In communities where there was an existing infrastructure or a key community agent to guide coordination (such as a backbone organization), there was greater evidence of resource sharing, networking, referrals, communication, and other methods of collaboration. As such, these communities were better poised to create an effective SOC. In communities without an existing infrastructure or organizing agent, stakeholders struggled to have a coordinated effort that addressed resource gaps. Further, sometimes stakeholders within these communities viewed other supportive initiatives as duplicative or competitive.

Key Findings at the Program/Family/Individual Level

Overall MA MIECHV programs have been quite effective in accomplishing their goals with participants. Almost all of the mothers who participated in the Parents Together groups reported improvements in their ability to maintain positive social support networks. Participants who completed the MBD program were markedly less depressed, less stressed, and reported higher levels of social support at the end of their program, and even those mothers who attended only a handful of MBD sessions experienced a significant decrease in depressive symptoms from their first to last sessions.

Results from the RCT showed positive impacts in four of the six HFM goal areas: when compared to mothers in the control group, home visited mothers experienced less homelessness, exhibited fewer depressive symptoms, reported less substance use and fewer ER visits, were more likely to self-advocate, and had children with better working memory. Additional impacts emerge when particular subpopulations are considered; mothers who entered the program without a history of childhood maltreatment tended to fare better on a number of indicators, as did mothers with high depressive symptoms at program entry. Results from pathway analyses demonstrate that early program impacts effect change in related domains at later time points, suggesting that the positive impact of home visiting extends well beyond the time of program engagement.

7B. Policy Implications & Recommendations

Central to the SOC framework is a philosophical orientation that asserts that no single system is equipped to achieve "good outcomes" on its own, and that paradigm shifts and vision-based reforms are necessary to truly meet the needs of vulnerable children.[xl,xli] The MIECHV legislation is imbued with this language, recognizing that the long-term success of MIECHV is predicated on how effectively home visitation becomes embedded in, and considered vital to, broader social structures and service delivery systems. From a policy perspective, this federal recognition that a home visiting program is not a solitary silver bullet, but rather an essential component in a larger early childhood SOC,[xlii] is crucial. On the other

hand, implicit in this statement is that there is a tangible early childhood SOC in which the home visiting programs can be embedded. Results across the evaluations suggest the realities at the community level are more nuanced, but also highlight potential pathways to create and strengthen SOCs at the community level.

Broader strategic vision

A sustainable method of funding the work to build and strengthen a SOC needs to have a long-term vision as well as oversight and guidance in order to lend legitimacy and leadership to the process. An overarching early childhood SOC, beyond that spuriously created by initiative-specific mini-systems, can only be strengthened and sustained by input and guidance from an entity with a larger-picture perspective, such as DPH and/or EEC. Until then, these mini-systems are fulfilling their missions, enacting their plans, and meeting the needs of their constituents, but they will not need to prioritize linking to each other in order to strengthen a larger SOC.

Create SOC infrastructure that is aligned at the state and community levels

A community can only be successful in supporting the families when there is a coordinated and collaborative infrastructure of agencies and coalitions focused on getting families the support they need. Interagency collaboration not only helps to organize available resources and remove barriers to accessing services, but it also helps to create a community infrastructure that is both continuous and complementary. While it is important to promote and/or require interagency collaboration, it is also important to build capacity around interagency collaboration in order to have a useful and sustainable impact.

Bring the right people to the table

As demonstrated throughout the evaluation report; there is significant activity at the community level; multiple initiatives are in place, collaborations are plentiful, and myriad providers are already working together to try to coordinate services. HC observed in their systems study that an important first step in systems-building is to map the existing system landscape, and identify the most significant and remediable gaps. One service gap that consistently emerged across evaluation components was housing. And yet there were few community-level collaborations between MA MIECHV programs and representatives from the local housing authority. Nor were housing leaders included in the state-level collaborations leading the design and implementation teams that drove MA MIECHV. That this gap is significant is undeniable; that it is remediable depends on the willingness and ability of state actors to coalesce with purpose around this particular unmet need. In a way, the same can be said about DTA representatives; while DTA staff were present during the early planning phases of this grant, meaningful participation dropped off once the program was rolled out. Without concerted state efforts around these particular collaborations, it is unlikely that representatives from these service sectors will be able to maintain participation in community-level system-building activities, despite their importance to comprehensive early childhood SOC.

Incentivize collaboration

Collaborations are critical to well-functioning SOCs. They also take time and resources to cultivate and maintain. Findings from the CCS suggest that MA MIECHV LIAs would be more inclined to take an active role in establishing collaborations if their expertise in serving families is specifically sought, and they could perceive some benefit beyond a networking opportunity. Given the drive of LIAs to best serve the families in their programs, they would be willing to engage in the process of infrastructure building and strengthening a SOC at every level, as long as there was a perceived benefit to their programs and the families they serve. Finally, the work of collaboration should not be considered an extracurricular activity; it should be written into job descriptions, accounted for in working hours, and compensated monetarily.

7C. Program Implications & Recommendations

While it may seem counter to many of the recommendations made above, it is also important to remember that home visiting, at its core, is a direct service program. The sole unifying feature across the MIECHV EBHV models is the locus of service delivery. Otherwise there is great variability in program goals (e.g., reducing child maltreatment, enhancing birth outcomes), service modalities (e.g., a single postpartum visit; weekly visits over years), staffing (e.g., paraprofessional, nurse), and target populations (e.g., high-risk, universal). There is considerable variability in program impacts as well; across EBHV models, and even for multiple iterations of the same model, variable impact findings have emerged, depending on the fidelity of program implementation, population receiving services, context of program delivery, and type and timing of measures used to determine effects. For the domains in which impacts have been demonstrated—child health and development, maternal well-being, economic self-sufficiency, reproductive health, family planning, education, and family violence — the story line is inconsistent.[xliii,xliv,xlv,xlvi] Nonetheless there is a tendency to speak of "home visiting" as a single, uniform enterprise, and to both overstate and understate its effectiveness and promise.

Much is expected of home visiting programs, as is reflected in MIECHV requirements, EBHV model expectations, and local LIA policies and accountability measures. Meta-analyses of home visiting evaluation findings, however, suggest more measured, nuanced, and context-specific interpretations. Given the relatively modest service dosage delivered by most home visiting programs and the daily challenges confronting many participants and host communities, one could view these scattershot but accumulating findings as evidence of the hardiness of the home visiting approach. However, they also should be viewed as a reminder of how important it is for program developers, frontline personnel, and researchers to articulate and measure *what is achievable and meaningful* for the populations that are served program-to-program, within the contexts in which these programs operate. Reliance on performance standards should be balanced by a continued revisiting and interrogation of their usefulness, relevance, and feasibility within local contexts, and with particular populations.[xlvii] And program modifications should be aimed at making it easier for home visitors to do their essential work.

Address the service coordination issue

Findings from both the CCS, HCSS and SNAP highlight communities' lack of availability and/or accessibility of concrete resources for families in need, and the consequent difficulty experienced by home visitors attempting to connected these families to services; housing in particular emerged as a driving, and incredibly time-consuming, unmet need. In light of this reality, the fact that HFM was able to positively affect homelessness is quite remarkable. This suggests that, as low as the "effort to yield" ratio is for housing referrals (see CLQ5), it may still worth it in the end for some families. On the other hand, home visitors have multiple job responsibilities; care coordination is not technically supposed to be one of them. It is perhaps unreasonable to expect a home visiting program to simultaneously function as a "key entry point into the SOC" and a "key service provider within the SOC"; time spent helping a participant complete a housing application is time when the home visitor could have been teaching about developmental milestones. One solution to this would be to have a more robust service coordination strategy in place at the program level. This may be accomplished through the more targeted collaborations discussed above, but programs may also be well-served by having dedicated care coordinators as part of their staff.

Increase training/resources for staff on maltreatment and trauma

The moderation models reported in ILQ4 underscore the important role maternal and family characteristics play in determining for whom the program works and in what ways. When clients enter the program with their own maltreatment histories, program staff may face particular challenges effecting change in parenting and self-care behaviors. The likelihood that at least one in two participants has experienced maltreatment is a sobering, but not insurmountable, statistic. Several evidence-based approaches demonstrate positive program impacts on parenting behaviors in vulnerable parents, many of which involve filming mothers and children, and providing for video feedback. Home visiting programs may want to invest in some concentrated training opportunities in these intervention techniques for interested staff as part of a career ladder/professional development track. While it might not be possible for all staff to receive this training, providing these specialized training opportunities for one or two individuals at each program site may allow for more intensive services for the families who could benefit most. This also may serve a dual purpose of investment in staff, which could decrease staff turnover.

Importance of program enhancements

Descriptive information about the MHFE-2EC and MBD samples show in fairly stark detail how vulnerable the home visited populations are. MBD served an extremely important role in those MA MIECHV communities that benefited from its services. The striking results of the MBD study suggest that the program was able to produce positive outcomes in a relatively short time, and the home visiting programs reported how grateful they were to have a resource like this for the depressed mothers in their caseloads. In communities that are typically under-resourced in terms of mental health services, programs like MBD, designed to work in collaboration with home visiting, can fill a serious gap. In the absence of federal funding, program administrators should continue to think about creative ways to support such initiatives moving forward, given how well they complement home visitation.

8. PLAN FOR DISSEMINATION OF EVALUATION FINDINGS

Evaluation findings will be disseminated to a wide range of constituencies in the upcoming months. Evaluation briefs will be distributed to LIA's in May 2017, and evaluators will present findings at MA MIECHV program staff (September 2017) and coordinator meetings (March 2017), as well as smaller presentation to individual LIAs as requested. Full evaluation reports for each component described in this document have been, and will be made available to MDPH, EEC, Children's Trust, and other interested state partners. Evaluators will continue to present findings at selected conferences and national meetings (e.g., abstract submitted for the September 2017 Grantees meeting). Partnerships with other research and evaluation entities (e.g. PEW and the Home Visiting Research Collaborative) will continue. Finally, submissions for peer-

reviewed journals will be prepared in collaboration with MDPH; the FLCR study abstract has been accepted for the special MIECHV issue of the Maternal and Child Health Journal.

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